























THE  
HOME LOVERS'  
LIBRARY

DR. ORISON SWETT MARDEN

*Editor-in-Chief*

GEORGE RAYWOOD DEVITT, M.A.

*(Member National Geographic Society, Member Anthropological Society)*

*Managing Editor*

---

*A LIBRARY OF  
AMUSEMENT AND INSTRUCTION*

EMBRACING THE ARTS, SCIENCES, LITERATURE, HISTORY,  
BIOGRAPHY, GEOGRAPHY, COMMERCE, FINANCE,  
STATISTICS, &c., CONCISELY ARRANGED  
FOR READY REFERENCE.

---

VOLUME VI.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12

BUREAU OF NATIONAL LITERATURE AND ART  
NEW YORK AND WASHINGTON

1906



AE 6  
M 6

LIBRARY of CONGRESS  
Two Copies Received  
FEB 21 1907  
Copyright Entry  
*Sep. 4, 1906*  
CLASS A XXc., No.  
*154616.*  
COPY B.

COPYRIGHTED 1906  
BY  
THE BUREAU OF NATIONAL LITERATURE AND ART.



## EDITORIAL STAFF

---

ORISON SWETT MARDEN

EDITOR-IN-CHIEF.

GEORGE RAYWOOD DEVITT, M.A.

MANAGING EDITOR

---

### *ASSOCIATE EDITORS*

MARION FOSTER WASHBURNE      CHARLES G. D. ROBERTS, M.A.

ELISABETH SYLVESTER

ELSA BARKER

WILBUR FISK HINMAN

JASON E. HAMMOND

ERNEST SETON-THOMPSON

DANIEL BATCHELLOR

ANNA McCLURE SHOLL

MRS. THEODORE W. BIRNEY



## LIST OF CONTRIBUTORS

---

*"They give us their best from the fullness of their lives."*

---

REV. THOMAS ROBERT SLICER  
 CHARLES FREDERICK WINGATE  
 DR. FELIX LEOPOLD OSWALD  
 Recorder Equitable Life Assurance Company  
 SAMUEL FROST  
 ARTHUR TWINING HADLEY  
 President Yale College  
 DAVID STARR JORDAN  
 President Leland Stanford Jr. University  
 CHARLES FRANKLIN THWING  
 President Western Reserve University  
 HAMILTON WRIGHT MABIE,  
 LL.D.  
 RANDOLPH GUGGENHEIMER  
 HENRY MORTON  
 President Stevens Institute of Technology  
 REV. DR. F. C. IGLEHART  
 HEZEKIAH BUTTERWORTH  
 Editor Youth's Companion  
 SAMUEL SILAS CURRY  
 President School of Expression, Boston  
 EDWARD EVERETT HALE  
 REV. ROBERT COLLYER  
 CHARLES M. SCHWAB  
 BISHOP JOHN F. HURST  
 REV. DAVID JAMES BURRELL  
 NEWELL DWIGHT HILLIS  
 REV. FRANK W. GUNSAULUS  
 REV. M. SOLLEY  
 St. Patrick's Church, Newburgh, N. Y.  
 DR. CHARLES D. McIVOR  
 President N. C. State Normal School  
 HENRY MITCHELL MACCRACKEN  
 Chancellor New York University  
 GEORGE FREDERICK SHRADY,  
 M.D.  
 WILLIAM TOD HELMUTH, M.D.

DR. JOHN I. HART  
 President N. Y. State Dental Association  
 FREDERICK RENÉ COUDERT  
 GENERAL BENJAMIN FRANKLIN  
 TRACY  
 PROFESSOR ISAAC FRANKLIN  
 RUSSELL  
 ALLAN FORMAN  
 Editor of "The Journalist"  
 HENRY WATTERSON  
 WILLIAM D. HOWELLS  
 ANTHONY HOPE  
 EDGAR FAWCETT  
 JAMES WHITCOMB RILEY  
 BERTHA RUNKLE  
 EDWIN MARKHAM  
 CHARLES WESLEY EMERSON  
 President Emerson College of Oratory  
 WILLIAM MERRITT CHASE  
 PROFESSOR DANIEL BATCH-  
 ELLOR  
 JOHN GALEN HOWARD  
 Architect of the University of California  
 CONSTANT COQUELIN  
 RICHARD MANSFIELD  
 MINNIE MADDERN FISKE  
 JULIA MARLOWE  
 JOHN FISKE  
 THEODORE ROOSEVELT  
 BENJAMIN B. ODELL, JR.  
 Governor of New York State  
 EX-SPEAKER GALUSHA AARON  
 GROW  
 SENATOR JOSEPH BENSON FOR-  
 AKER



- BENJAMIN F JONES  
JOHN ROBERT PROCTOR  
President of the U. S. Civil Service Commission  
ADMIRAL SCHLEY  
LIEUTENANT-GENERAL MILES  
GEORGE W. McCLUSKY  
Chief of Detectives, N. Y.  
WILLIAM M. WELCH  
DR. T. C. MARTIN  
PARK BENJAMIN  
THOMAS A. EDISON  
HUDSON MAXIM  
CHARLES C. BAYLIS  
CARROLL DAVIDSON WRIGHT  
U. S. Commissioner of Labor  
JAMES B. REYNOLDS  
REV. A. P. DOYLE  
SECRETARY CHARLES D. WILSON  
CHARLES F. HEXAMER  
Editor of "The American Agriculturist"  
ISAAC PHILLIPS ROBERTS  
Director College of Agriculture and of the U. S. Experimental Station, Cornell University  
HENRY SABIN  
WILLIAM FLETCHER KING  
President Cornell College, Ia.  
CHARLES RANLETT FLINT  
JOHN GREENE  
Editor Bradstreet  
CLEMENT C. GAINES  
E. P. HATCH  
Of Lord & Taylor's  
NATHAN STRAUSS  
Of R. H. Macy & Co.  
MILES M. O'BRIEN  
Representative of H. B. Claflin & Co.  
LYMAN JUDSON GAGE  
Secretary Treasury United States  
GEORGE WALTON WILLIAMS  
GAGE E. TARBELL  
Second Vice-president Equitable Life Assurance Company  
HENRY CLEWS  
JAMES J. HILL  
ALEXANDER JOHNSON CASSATT  
WILLIAM M. GARRETT  
REBECCA HARDING DAVIS  
ELIZABETH CADY STANTON  
JENNIE JUNE CROLY  
ELLA WHEELER WILCOX  
MRS. EDWIN MARKHAM  
BELVA ANN BENNETT LOCKWOOD  
ELLA A. BLACK  
HARRIET PRESCOTT SPOFFORD  
MAY WRIGHT SEWELL  
MRS. CHARLES WARREN FAIRBANKS  
WILBUR F. JACKMAN  
Professor of Natural Science, Blaine School, University of Chicago  
J. MERLE COULTER  
Professor of Botany, Chicago University  
MILTON UPDEGRAFF  
U. S. Naval Observatory  
BAXTER MORTON, M.D.  
U. S. Patent Office  
CHARLES F. JOHNSON  
JULES GUTHRIDGE  
CHARLES A. CONANT  
Special Commissioner Finance to Philippines, New York Journal of Commerce  
CHARLES F. BENJAMIN  
G. STANLEY HALL, LL.D.  
President Clark University, Worcester  
JESSE WALTER FEWKES  
Bureau of Ethnology, U. S.  
CARL HENRY ANDREW BJERREGAARD  
Librarian, The Astor Library, N. Y.  
CHARLES JOHNSTON  
BLISS CARMAN  
Author — Poet  
EPIPHANIUS WILSON  
MRS. GEORGE NASH  
MARION FOSTER WASHBURNE  
NORMAN FOSTER, M.D.  
KATE BLAKE  
JOHN H. McCORMICK, M.D.  
MRS. THEODORE W. BIRNEY  
ELIZA MOSHER, M.D.  
Professor Hygiene Department and Women's Dean, University of Michigan



ORISON SWETT MARDEN

D. F. ST. CLAIR

LIDA A. CHURCHILL

REV. EDWARD PAYSON TENNEY

ARTHUR W. BROWN

MARGARET CONNOLLY

ERNEST W. HOLMES

REV. W. J. TILLEY

ERNEST SETON-THOMPSON

FRANK ROE BATCHELDER

JASON E. HAMMOND

Superintendent of Education Michigan

ARTHUR F. WILLISTON

Director of Science and Technology, Pratt Institute

REV. WILLIAM STEPHEN RAINSFORD

REV. CHARLES H. EATON

MILES O'BRIEN

Chairman Board of Education, New York

MARY F. PEABODY

CHARLES G. D. ROBERTS

Author — Poet

JULIA WARD HOWE

ELIZABETH CADY STANTON

MRS. FRANK LESLIE

HENRIETTE HOVEY

Pupil and for some time assistant of the celebrated Gustave Delsarte

MAY ELIZABETH WILSON SHERWOOD

WILLIAM S. HILLS

Secretary of Gymnasium, Columbia College

MRS. RUSSELL SAGE

WILLIAM ORDWAY PARTRIDGE

Sculptor — Author

LESLEY GLENDOWER PEABODY

JAMES GIBBONS HUNEKER

Author — Music Critic with New York Musical Courier

LOUIS CHARLES ELSON

Professor N. E. Conservatory of Music

ABBEY PERKINS CHENEY

WILLIAM JAMES HENDERSON

Musical Critic — Author

WILLIAM SMITH BABCOCK  
MATHEWS

Editor of "Music," Musical Writer

HUGH ARCHIBALD CLARKE

Professor of Music at University of Pennsylvania

MARY FANTON

Editor "New Ideas" (Magazine)

ANNA MCCLURE SHOLL

ROLAND HINTON PERRY

Sculptor, Designer of "Court of Neptune," Congressional Library

CHARLES E. LITTLEFIELD

U. S. Congressman

JULIUS ST. GEORGE TUCKER

Former Consul at Martinique, W. I.

HENRY CODMAN POTTER

P. E. Bishop of New York

ELSA BARKER

Author

CHARLES DUDLEY WARNER

Essayist and Novelist

WINSTON CHURCHILL

Author and Novelist

LOUISE CHANDLER MOULTON

Novelist and Poet

EDWARD S. ELLIS

BEATRICE HARRADEN

Novelist

WILLIAM CLARK RUSSELL

Novelist

THURLOW WEED

Editor — Politician

HENRY GEORGE

Political-economist

RICHARD HENRY STODDARD

Poet — Reviewer

EDMUND CLARENCE STEDMAN

Poet — Critic

THOMAS COLLIER PLATT

U. S. Senator — President U. S. Express Company

SILAS WIER MITCHELL, M.D.

Author

EDMUND GOSSE

Poet — Essayist — Critic

ROBERT GRANT

Author — Judge of Probate and Insolvency

GEORGE C. BARRETT

MRS. LELAND STANFORD

JOHN DAVIDSON ROCKEFELLER

Capitalist

MARSHALL FIELD

Merchant

RUSSELL CONWELL

President Temple College

GEORGE RAYWOOD DEVITT  
M.A.

LELAND OSSIAN HOWARD

Chief of Division of Entomology U. S. Department of Agriculture

THOMAS WENTWORTH HIGGINSON

Author

GENERAL THOMAS L. ROSSER

SAMUEL M. BRYAN

JOHN W. GOFF

CHAUNCEY MITCHELL DEPEW

U. S. Senator

GEORGE WESTINGHOUSE

Inventor — Manufacturer

STEPHEN BENTON ELKINS

U. S. Senator

JOSEPH EDWARD SIMMONS

Banker

WILLIAM CONANT CHURCH

Editor — Author

ARTHUR WING PINERO

Dramatist

JOSEPH HODGES CHOATE

U. S. Ambassador to England

WILLIAM VINCENT ALLEN

Ex-Senator

JOHN W. KELLER

JONATHAN P. DOLLIVER

Congressman — Lawyer

THOMAS LEMUEL JAMES

Ex-Postmaster — General — Banker

ISAAC N. SELIGMAN

Banker

ANDREW CARNEGIE

Manufacturer

ROSWELL P. FLOWER

Ex-Governor of New York

RUFUS ROCKWELL WILSON

CHARLES BROADWAY ROUSS

Merchant

JOHN EAMES

General Manager, H. B. Claflin Company

JOHN GILMER SPEED

Author — Journalist

FRANK LEE FARNELL

SAMUEL LANGHORNE CLEMENS  
(MARK TWAIN)

JOHN QUINCY ADAMS WARD  
Sculptor

WILBUR FISK HINMAN

FRANCES MARION CRAWFORD

Novelist

GEORGE CLEMENT PERKINS

U. S. Senator

JOSEPH PULITZER

Proprietor New York "World"

ANTHONY BRADY

THOMAS HENRY CARTER

Ex-Senator

ALBERT J. BEVERIDGE

U. S. Senator

J. C. BAYLIS

Formerly Editor "Iron Age"

CHARLOTTE DOBBINS

EUGENE F. BISBEE

J. D. WARFIELD

ELSIE HOLFORD

ORIANA M. WILLIAMS

MARY ANNA BROWN

HENRY B. RUSSELL

MORTIMER A. DOWNING

FREDERICK A. SAWYER

CYRUS P. JONES

E. E. HIGGINS

DUDLEY A. SARGENT

Professor Physical Culture, Harvard University

W. H. BALLOU

ROBERT MACKAY

LAURA MORGAN

MARGARET ELIZABETH SANGSTER

ANITA NEWCOMBE MAGEE, M.D.

ROSCOE L. PETERSON

U. S. N. A.

HARRY C. LEWIS

Department of Justice

MARGARET B. DOWNING

HENRY KETCHAM

L. C. EVANS

CELESTE BENNETT DOBBINS

REV. DR. WILLIAMS



MARY SQUIRE HINMAN

MARY TWOMBLY

FLORENCE LIPPINCOTT

M. DE HAAS BULKLEY

E. S. BASS

LESLIE F. CLEMENS

E. L. SNELL

J. P. COUGHLAN

MADELEINE KENDRICK VAN  
PELT

HARRY STEELE MORRISON

RUTH EVERETT

PAUL LATZKE

H. I. DODGE

F. L. BLANCHARD

R. M. FULLER

ELISABETH SYLVESTER

AMELIA EDITH BARR,

Author

J. C. BROWN

J. G. TUCKER

FRANCES TOBEY

H. M. LOWE

VAN CULLEN JONES

EMILY C. SHAW

J. C. RANSOM

J. H. DEMPSEY

EMMA P. HEALD

C. H. CLAUDY

ELIZA PITTMAN

FLORENCE LOUISE HART

E. L. BRENIZER

ETC. ETC. ETC. ETC.

TABLE OF CONTENTS

VOLUME VI

PHYSICAL CULTURE

	PAGE		PAGE
HEALTH . . . . .	7	DIET . . . . .	13
SLEEP . . . . .	10	CLOTHING . . . . .	15
THE BATH . . . . .	11	EXERCISE . . . . .	16

PHYSICAL TRAINING

THE EDUCATIONAL VALUE OF PHYSICAL TRAINING . . . . .	17	BREATHING EXERCISES . . . . .	26
GENERAL OR FREE MOVEMENTS . . . . .	21	THE INDIAN CLUB . . . . .	26
EXERCISES FOR THE ARMS AND THE SHOULDERS . . . . .	21	THE WOODEN DUMB-BELL . . . . .	28
EXERCISES FOR THE NECK . . . . .	22	THE CHEST WEIGHTS . . . . .	30
EXERCISES FOR THE TRUNK . . . . .	22	THE WAND . . . . .	32
EXERCISES FOR THE LEGS . . . . .	22	SWIMMING . . . . .	35
EXERCISES COMBINING THE ARMS, THE TRUNK, AND THE LEGS . . . . .	23	EXERCISES WITH CHAIRS . . . . .	37
GRASSHOPPER JUMPS . . . . .	24	THE HORIZONTAL BAR . . . . .	38
RUNNING ON PLACE . . . . .	24	THE PAIR OF RINGS . . . . .	40
EXERCISES FOR THE ABDOMEN . . . . .	24	THE DOUBLE INCLINED POLES . . . . .	41
		THE INCLINED LADDER . . . . .	43
		THE VERTICAL POLE OR ROPE . . . . .	44

PASTIMES, SPORTS, AND GAMES

SPORTS AND GAMES — INDOOR		BOWLING — <i>Continued</i>	
BOWLING . . . . .	47	The Newport Game . . . . .	58
Revised Playing Rules of the American Bowling Congress . . . . .	52	Tenpin Head-pin Game . . . . .	58
Cocked Hat . . . . .	55	Duck-pin Game . . . . .	58
Cocked Hat and Feather . . . . .	55	BASKET BALL . . . . .	59
Quintet . . . . .	56	Rules . . . . .	62
Nine Up and Nine Down . . . . .	56	BACKGAMMON . . . . .	69
Head Pin and Four Back . . . . .	56	Technical Terms of Backgammon . . . . .	72
Four Back . . . . .	57	Laws of the Game of Backgammon . . . . .	73
American Ninepins . . . . .	57	Hints to Beginners . . . . .	74
Five Back . . . . .	57	Best Plays . . . . .	74



	PAGE		PAGE
CHESS . . . . .	75	BICYCLING — <i>Continued</i>	
The Arrangement . . . . .	76	Racing . . . . .	161
The Moves . . . . .	77	Fancy Riding . . . . .	162
Chess Notation . . . . .	78	Polo . . . . .	162
Abbreviations . . . . .	79	Physical Advantages . . . . .	163
Technical Terms in Chess . . . . .	79	Care of the Wheel . . . . .	163
Laws of Chess . . . . .	81	WALKING CLUBS . . . . .	164
Hints to Beginners . . . . .	83	Making up the Party . . . . .	165
DRAUGHTS OR CHECKERS . . . . .	86	Long-Distance Walks . . . . .	166
The Board and Men . . . . .	86	HARE AND HOUND . . . . .	168
The Moves . . . . .	87	Before the Start . . . . .	169
The Losing Game . . . . .	89	The Run . . . . .	170
Glossary of Technical Terms		QUOITS . . . . .	172
Used in Checkers . . . . .	89	The Ground . . . . .	172
Laws of the Game . . . . .	90	The Quoits . . . . .	172
Hints to Beginners . . . . .	91	The Game . . . . .	173
Exercises . . . . .	91	Rules . . . . .	174
DOMINOES . . . . .	94	BASEBALL . . . . .	174
Block Game . . . . .	95	The Ground . . . . .	174
Draw Game . . . . .	96	Ball, Bat, and Team . . . . .	175
Muggins or Fives . . . . .	96	The Game . . . . .	176
Bergen . . . . .	98	Duties of the Players . . . . .	177
ROLLER POLO . . . . .	99	Glossary of Technical Terms . . . . .	179
WATER POLO . . . . .	105	Rules . . . . .	180
The Game . . . . .	105	FOOTBALL . . . . .	197
Rules . . . . .	106	The Field . . . . .	198
ICE HOCKEY . . . . .	109	The Ball . . . . .	198
The Game . . . . .	109	The Team . . . . .	198
Rules . . . . .	113	The Uniforms . . . . .	198
FENCING . . . . .	114	The Game . . . . .	199
The Outfit . . . . .	115	Glossary of Technical Terms in	
General Instructions . . . . .	115	Football . . . . .	203
The Attacks . . . . .	119	Rules . . . . .	205
The Parries . . . . .	124	LACROSSE . . . . .	215
Fencing Rules of the Amateur		The Game . . . . .	215
Fencers' League of America . . . . .	129	Rules . . . . .	217
BOXING . . . . .	130	LAWN TENNIS . . . . .	221
Instructions for Beginners . . . . .	131	The Court, Rackets, and Balls . . . . .	222
WRESTLING . . . . .	141	The Game . . . . .	224
		Glossary . . . . .	228
		Rules . . . . .	229
SPORTS AND GAMES — OUTDOOR		TETHER BALL . . . . .	235
ARCHERY . . . . .	151	Rules . . . . .	237
The Bow . . . . .	151	CRICKET . . . . .	238
The Arrow . . . . .	153	Field, Ball, and Bat . . . . .	238
Stringing the Bow . . . . .	154	Glossary of Technical Terms . . . . .	242
Quivers and Targets . . . . .	155	Rules . . . . .	242
General Instructions . . . . .	155	CROQUET . . . . .	247
BICYCLING . . . . .	156	Ground, Mallet, Ball, Hoops . . . . .	247
How to Ride . . . . .	157	The Game . . . . .	248
Vacation Tours . . . . .	160	Glossary . . . . .	250
		Rules . . . . .	251

# TABLE OF CONTENTS

xiii

	PAGE		PAGE
GOLF . . . . .	255	ROLLER-SKATING . . . . .	310
Golf Clubs . . . . .	258	CAMPING . . . . .	311
Glossary . . . . .	259	The Inland Camp and the Camp	
Rules of Golf . . . . .	263	by the Sea . . . . .	312
Special Rules for Stroke Compe-		The Camp Stationary and the	
titions . . . . .	271	Camp Itinerant . . . . .	313
Etiquette of Golf . . . . .	273	The Chup-lah-quah-gan . . . . .	316
GOLF-CROQUET . . . . .	274	Camps and Their Kinds . . . . .	318
Rules . . . . .	276	Bedding and Clothing . . . . .	324
LAWN HOCKEY . . . . .	277	Food and Cooking . . . . .	326
The Field . . . . .	277	The Plague of Flies . . . . .	328
The Game . . . . .	278	Recreations in Camp . . . . .	329
Rules . . . . .	280	ROWING . . . . .	331
PONY POLO . . . . .	283	General Description . . . . .	332
Ground, Ball, Sticks . . . . .	284	Sculling . . . . .	337
The Game . . . . .	284	Laws of Boat Racing . . . . .	338
Rules . . . . .	286	CANOEING . . . . .	339
ICE POLO . . . . .	288	Canoes and Canoeing . . . . .	340
The Game . . . . .	289	Instructions for Canoeists . . . . .	344
Rules . . . . .	289	BOAT SAILING . . . . .	346
CURLING . . . . .	291	Sailboats and Sailors . . . . .	347
The Equipment . . . . .	291	KNOTS AND SPLICES . . . . .	352
Rules for Curling . . . . .	292	Knots . . . . .	352
Rules for Local Competition . . . . .	295	Hitches . . . . .	353
Glossary . . . . .	297	Splices . . . . .	353
TOBOGGANING AND COASTING . . . . .	299	AMATEUR PHOTOGRAPHY . . . . .	355
Tobogganing . . . . .	299	The Camera and the Lens . . . . .	355
Coasting . . . . .	301	Composition . . . . .	355
SKATING . . . . .	302	Exposure . . . . .	356
Instructions for Beginners . . . . .	303	Development . . . . .	361
General Rules . . . . .	305	Printing . . . . .	366
Figure Skating . . . . .	306	Blue-printing . . . . .	366
SKATE-SAILING . . . . .	307		
The Sails . . . . .	308		





# PHYSICAL CULTURE





## HEALTH

---

THE doctrines and dogmas concerning physical health have passed through more changes and phases in the course of history than has any system of theology. Next to the saving of his soul, the saving of his body has seemed to man his most important interest. His conception of how this could be done, has been in all ages a measure of his civilization.

In the earliest times, man's bodily ills seemed to him the work of evil spirits or demons. A sick person was looked upon as "possessed." There are many instances of this belief, in both the Old and the New Testaments. The morality of daily living was, in the law of Moses, closely bound up with ceremonials, the direct effect of which was upon the physical well-being. The Jewish religion was one of bodily as well as of spiritual health. The superstitions concerning demoniac possession of the sick still linger among uncivilized or partially developed peoples. The negroes retain these superstitions in regard to the various "miserics" with which they are afflicted, preferring in many cases the use of charms to legitimate remedies.

Throughout the medieval period, even the most highly civilized of the European nations were not free from the belief that bodily ailments were due to witchcraft, or to some other evil spiritual influence. During that period, also, the strong, natural desire of men to rid themselves of a disease quickly and suddenly, led to the belief in miracles, in supernatural cures by prayers, or through the influence of relics. That the niece of Pascal was cured of a disease of the eye by a miracle, was the universal belief of her contemporaries. And the phenomena which are yearly witnessed at Lourdes attest the strength of that instinct which seeks health directly from a supernatural source.

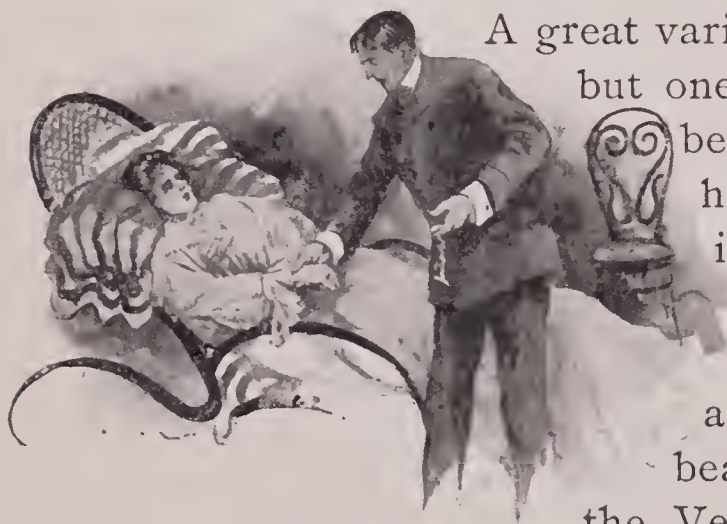
It would seem that from the earliest times men have sought physical wholesomeness in two ways: either through medicines and physicians, or through reliance on unseen powers. Of this latter method the most modern developments are the Christian and Mental Sciences, which attempt to found physical health upon mental or spiritual well-being.



The Greeks were, perhaps, the first nation to conceive of the beauty of physical health, and to use for its preservation such methods as daily baths, massage and athletic sports. Their dream of the perfectly sound and beautiful body was expressed again and again in marble. In the Venus of Melos they fixed the type of feminine health and beauty; that of masculine health and beauty in innumerable statues of gods and athletes. The Greeks, with their love of outdoor life, of bathing, of exercise, became the most naturally healthy of all nations, establishing a standard of beauty directly dependent upon health, which in after times was never lost sight of completely, even when the asceticism of the Middle Ages made the body something to be despised, and regarded sickness as a means of spiritual purification.

During this period, and to the beginning of the nineteenth century, the science of medicine was in its infancy; and was for many hundred years entangled with such false sciences as that of astrology. A man might attribute his recovery from illness to medicine or to a fortunate conjunction of the planets. Only within the last hundred years has medicine become a strict science, founded upon an accurate and minute knowledge of man's physical organism. The period of experiment is not yet over, nor will it ever be, but the work of inquiry and research is now conducted on scientific principles.

The most radical difference between this age and preceding ages is the positive attitude of the modern world toward physical well-being. Formerly men wished only to avoid illness; now the universal desire is to extract from health the beauty and comeliness, the strength and joy which are embodied in the ancient Greek statues. Health has become a kind of moral obligation, the natural and desirable state of men. Everything favors this new glorification of physical harmony. The laws of health have never been so well understood nor so strictly obeyed as at the present time.



A great variety of outdoor games, such as golf and tennis, is but one good result of this modern appreciation of the beauty of health. Its most beneficent result, perhaps, is seen in the lives of women. Formerly it was considered the right of a woman of position to be fragile and ailing. Her refinement, her place in the social scale, were measured to a degree by her ability to faint easily. Her beauty lay in her wasp waist and her pallor. But the Venus of Melos type is again in the ascendant; and since the recognition of beauty as primarily dependent upon health has become universal, this type will keep its supremacy.

The preservation of health has a direct bearing upon every phase of social and domestic life; is perhaps as essential to moral and mental harmony as is right thinking and right living. Much of the depressing theology of earlier times had its origin, no doubt, in dyspepsia. In "Oldtown Folks" Mrs. Stowe tells of a farmer whose exclusive diet of pie and pork brought upon him the gloomiest views of predestination. The cheerfulness of a man's outlook upon the universe, or of that little corner of the universe most familiar to him, depends largely upon his health. He cannot do his work in the world if he is crippled by disease. He cannot preserve warm human feeling if his thoughts are continually upon himself. Disease shuts him in from the world. Health puts him in harmony with that abundant life which, pulsating through the universe, produces power and joy. To be strong and to be happy are the two central obligations of human existence, and in fulfilling these a man becomes good of necessity.

It is significant that Christ ever refused to separate the moral and physical well-being of man. When he healed men he forgave them their sins, making both soul and body whole. This unity of the being of man has been overlooked, chiefly as a result of the medieval abhorrence of the body. The followers of Christ forgot through many centuries the value which their Lord himself placed upon the bodies of men.

The exigencies of the modern world demand of its citizens more abundant health than was ever before requisite to meet the struggles of existence. The crowding together of many persons in great cities, the feverish demands of business life, the constant rush and hurry, make physical health necessary to success. To many "it is not an inheritance, but a greatness to be achieved." But, however hampered with the burden of ancestral ills, it is within the power of men and women to cultivate good health, as they would cultivate their minds or their moral faculties.

Early training has much to do with physical well-being; but defects in such training need not permanently hamper the acquirement of good health. Early hours, plain food, daily baths, and daily exercise, constitute a simple prescription for many ills. In addition, a cheerful spirit, a fixed determination to live gayly upon the top of the universe, and a disposition to find good in everybody and in everything, will complete the cure. Only the healthy man can understand how best "to love, work, play, and look up at the stars." Only the healthy man can know the full meaning and value of success.

Nature, the kindest of physicians, has made good health dependent not upon expensive drugs, but upon the right use of her provisions for man's welfare,—food and sleep, fresh air and sunshine.



## SLEEP

IN HIS organism man resembles a watch. He must be replenished with power at stated intervals, or brain and nerves refuse to do their work. This reinforcement depends largely upon a sufficient amount of sleep. When a man is asleep, nature can do more for him than in a waking state. He is completely in her hands there and she makes the most of her opportunity by building up his worn-out tissues, by strengthening his nerves, and by putting the entire machinery of his body into correct running order.

The value of sleep receives a good illustration in the part which it has in the first year of a child's life. Newly born infants are practically asleep during the whole of the day; and during the first year, the majority of the twenty-four hours are spent in sleep. Nature is storing up health and strength in the little body, having her own way with it until the brain becomes strong and the sinews sure. Children, who as a rule are natural in their instincts, demand and obtain their full measure of sleep.

It is when manhood is approaching, when social, and business, or educational, interests fill the life, that the temptation comes to disregard the homely nurse, Nature, and to reconstruct a code of physical well-being. Young men and women at college often boast that they can live and work on five hours of sleep; or they go into society, and turn night into day, believing that it can do them no harm. The bad effects of such courses may not show at once, but nature is a severe creditor. The effects of too little sleep show later in brain and nervous diseases, and even in apoplexy and paralysis. The least harmful effect is irritability; and irritability turns a man into a kind of moral mosquito. He is not dangerous, but he is annoying.

The Greeks had a religious veneration for sleep, conceiving it to be a drowsy god, Morpheus, crowned with poppies, into whose arms a man could creep and forget his troubles. "Sleep which knits up the raveled sleeve of care," wrote Shakespeare; and one of his sonnets is a complaint that the image of the Beloved has wronged him of his sleep. Many people and many nations have imagined death a long, beneficent sleep, from which the soul would awake refreshed.

The number of hours which should be spent in sleep varies with different temperaments. Highly nervous organizations require from eight to ten hours. A phlegmatic person may need but five or six hours. It is said of Napoleon and of Frederick the Great that they required but five hours of sleep. A good rule is to sleep until one wakes naturally. To go to bed early is desirable, because it is in accord with nature, who, if she had her way, would put all her

children to bed with the chickens. As soon as the sun goes down, the majority of animals creep to their rest. Sunset for man, on the contrary, is a signal to begin a secondary day of pleasure or relaxation. This day should close before midnight, if the full benefit of sleep is to be enjoyed.

Sleep may be robbed of its beneficial effect by wrong conditions. Fresh air and a great deal of it is essential in a bedroom, or the entire system will eventually be poisoned. The night air is no more harmful than the day air, and man should fill his lungs full of it while asleep. The bed-clothing should be warm, but not heavy, thus allowing the limbs full freedom. Authorities differ as to sleeping on the left or right side, but the general opinion now is that, as a rule, people should sleep on the right side, the body straight, the arms down. It is harmful to sleep with the arms above the head, as it puts a strain upon the muscles of the back and chest and interferes with deep breathing. It is desirable to breathe through the nose while asleep, and not through the mouth. These good habits can be formed by taking thought each night on retiring.

To insure unbroken rest, rich food should not be eaten immediately before going to bed. On the other hand, simple food such as hot milk or crackers, taken just before retiring, has been found of benefit in cases of insomnia.

So many persons suffer from insomnia, that a few remedies may be mentioned: warm baths are conducive to sleep, if taken just before bedtime; night-walks in the fresh air are also efficacious; or a brisk rubbing of the body on retiring. But however persistent the insomnia, an earnest warning is addressed to all sufferers not to take quieting drugs or powders. Their effect is only temporary, and when it has passed off the person is more than ever at the mercy of his sleeplessness. Insomnia indicates that some one of nature's laws has been violated; therefore only natural remedies are legitimate in repairing the evil. Let the sufferer keep a quiet mind, and persist in using natural means of producing sleep until nature comes to his relief. And on the slumber which she provides, there is no interest except the interest of good health.

#### THE BATH

NEXT to sleep, the frequent cleansing of the body is most important to physical well-being. If people had a better understanding of their bodily systems, they would have a keener appreciation of the value of bathing.

The skin is a porous tissue which, day and night, is in a state of activity, taking in certain materials and throwing out others. The



rejected material consists largely of carbonic acid, and of matter useless to the system and most poisonous when allowed to remain upon the body. The exhalations of the skin produce the offensive odor which sometimes fills occupied, unventilated rooms. The skin also takes in oxygen from the atmosphere, through the pores, which average twenty-eight thousand to the square inch, or seven million for the whole surface of the body.

It will be readily seen, therefore, that unless the entire surface of the body is cleansed, the pores will become clogged with impure matter, which, accumulating more and more, will finally exclude the oxygen necessary for the preservation of health. The sluggishness of the pores reacts upon the circulation of the blood, producing colds, and a variety of more serious disturbances, such as rheumatism, inflammation, cramps and fevers. Persons who do not bathe frequently are also more likely to contract infectious diseases, scarlet fever, measles or smallpox. The daily bathing of the entire body is requisite for perfect health.

This bath should take place in the morning, immediately upon rising, when the vital powers are strongest. The temperature of the water should be only a little less than that of the body. Cold baths should not be taken except by persons in the most vigorous health; and these should be merely plunge baths. Immediately after bathing, the body should be briskly rubbed with a coarse towel, until a glow is felt over the entire surface. Rubbing is almost as essential as bathing, because of the brisk circulation of the blood which it produces. If a reaction does not follow cold baths, they should be discontinued.

Warm baths should be taken only at night, just before retiring, as cold is likely to result from exposure to the air, after the pores have been opened, and the system is relaxed. After bathing in warm water, an application of cold water is invigorating and strengthening. Turkish baths should not be taken by persons of delicate constitution.

Bathing has an esthetic as well as a hygienic influence. In one of Mrs. Whitney's novels, the question "Why was Venus born of the foam of the sea?" receives the answer "Because one must be clean before one can be beautiful." This is literally true. The foundation of beauty is health, and the foundation of health is a wholesome, clear skin, from which all impurities are daily washed away. There is also a certain moral value in bathing, which finds its expression in the old adage, "Cleanliness is next to godliness." The pure body is indicative of a pure spirit.



## DIET

THERE is a saying, "Tell me what a man eats and I will tell you what he is." Diet is one of the most important considerations in the preservation of health, and cannot be the subject of too careful attention, on the part of individuals and of those who have the physical well-being of a household under their care.

Americans are justly accused of over-eating. The abundance and variety of the food produced in the United States is partly responsible for this bad habit, for the temptations to an epicurean diet are many. The disposition of the nation to "do everything too much" is another cause of over-eating. In consequence, a nation of dyspeptics has been evolved, whose habits of eating are the amazement of Europeans.

The stomach is to the body what the boiler is to the engine, the proper working of every part of the mechanism being dependent upon it. The mechanism cannot work at all, if it is out of order; or it works disjointedly and to no purpose. It follows, therefore, that men must not abuse their stomachs if they would enjoy health.

First of all, they should not eat too much. The primary use of food is to nourish the body and not to tickle the palate. When hunger is satisfied and eating becomes a mere indulgence, its highest power is frustrated.

To satisfy hunger, the plainest foods only are necessary. Rich foods are only producers of dyspepsia and other physical ills. This is so because fine, rich and concentrated foods resist the action of the gastric juice, and so lie upon the stomach instead of digesting properly; while upon plain foods, plain meats, vegetables, bread, etc., the gastric juice takes instant and healthy action, so that the body has the immediate benefit of its fuel. There is neither waste nor delay.

Americans, as a rule, eat too much greasy meat, and by far too much pie and pastry and other carbonaceous food. They make the mistake also of eating the heaviest foods in summer, as well as in winter, consuming pork chops with brown gravy on the Fourth of July as if it were midwinter, and in other foolish ways tempting Providence. To crown their misdeeds, they drink iced water through a heavy dinner, chilling the poor stomach, which has already a task inadequate to its natural powers. The ice-water habit is one of the most vicious of American habits, and is the cause of innumerable ills.

On the other hand, sufficient water is not drunk between meals. Many physicians believe that to keep the system in healthy condition, we should drink at least two quarts of water a day. The wisdom of water drinking is obvious. Impurities of the body are carried off

and the inside of the body is cleansed. If Americans would substitute milk or water for strong tea and coffee, their reputation as a highly nervous people would decrease

Too many people have but one conception of the meaning of intemperance. They apply it always to the use of spirituous liquors, whereas intemperance may be manifested in drinking tea or coffee, or in eating candy. American women are intemperate in candy eating, and both men and women in coffee drinking. Coffee is sometimes drunk three times a day, and in the majority of households twice. In consequence, Americans are the prey of a host of nervous diseases, and have become a byword among the nations because of their nervous characteristics. The climate of this country and the constant rush and hurry are stimulating enough, without exciting the already overtaxed nerves with excessive coffee and tea drinking.

This nervousness leads in its turn to fast eating. Dickens's description of an American boarding-house dinner, in "Martin Chuzzlewit," is still typical of the rush of the people at mealtime:—

"All the knives and forks were working away at a rate that was quite alarming; very few words were spoken; and everybody seemed to eat his utmost in self-defense, as if a famine were expected to set in before breakfast time to-morrow morning, and it had become high time to assert the first law of nature. The poultry disappeared as rapidly as if every bird had had the use of its wings and had flown in desperation down a human throat. The oysters, stewed and pickled, leaped from their capacious reservoirs, and slid by scores into the mouths of the assembly. The sharpest pickles vanished, whole cucumbers at once, like sugar plums, and no man winked his eye. Great heaps of indigestible matter melted away as ice before the sun. It was a solemn and an awful thing to see. Dyspeptic individuals bolted their food in wedges; feeding not themselves, but broods of nightmares, who were continually standing at livery within them. Spare men, with lank and rigid cheeks, came out unsatisfied from the destruction of heavy dishes, and glared with watchful eyes upon the pastry."

The whole economy of living is disturbed by the habit of fast eating. It is the direct cause of indigestion, and indigestion is the direct cause of bad temper, gloomy views of life, and of all the other sins implied by profound selfishness. The dyspeptic nature of Thomas Carlyle embittered the existence of his wife, and destroyed, to a degree, his usefulness as a teacher of society. But it is needless to dwell upon the evil effects which follow an abuse of the digestive organs. These effects are everywhere visible. The remedies are simple and can be followed by everyone.

In the first place, plain foods should be eaten; and these should be well cooked, the meats broiled or roasted, not fried, and the vegetables carefully prepared, without too much seasoning or butter. For



breakfast, fruits and cereals should be eaten, and eggs in preference to meat. If meat be eaten, it should be a simple lamb chop, well broiled, or a preparation of hashed meat and potatoes. An abundance of vegetables, good thick soup, and well-baked bread should, as far as possible, take the place of meats.

Pie and cake will be eaten with care and moderation by those who are wise. Simple puddings, and, at times, a little pure candy, should satisfy the craving of the system for sweets. This craving is often abnormally developed in persons whose ancestors were intemperate in the eating of pastry, and should be brought to normal proportions by careful diet.

The hours for meals should be so arranged that the members of a household will not be forced to eat hastily. The social dignity and importance of mealtime should be recognized, thus transforming the function from a mere animal necessity to an opportunity for social intercourse and enjoyment. Europeans take much more time for their meals than Americans, and they recognize the social importance of eating. This nation can never boast of being wholly civilized until it follows the European example. Life holds many other joys besides making money, and a man may well forego a part of his gains for the pleasure that he may find with his family and friends. Eating between meals is another source of woe.

The golden rule, the summing up of the whole subject is "eat to live" in the strongest and happiest way, in the way most beneficial to oneself and to society at large.

#### CLOTHING

It is unfortunate that hygienic clothing is not always the most beautiful. A compromise may be made, however, between health and beauty which will sacrifice neither. In a climate like that of the United States, where a dozen varieties of weather may enliven the dullest day, the secret of hygienic dressing is to have a sufficient variety of clothing, and to change it to meet atmospheric conditions. It is a mistake to wear heavy clothes from November to May merely because it is the winter season. Such uniform dressing is productive of colds. The underwear should be, perhaps, of the same thickness, but the outer wraps should be varied according to the temperature. A seal-skin jacket or a heavy fur-lined coat is well adapted to a freezing temperature, but should not be worn on the milder days of winter.

The feet should always be well protected, thick-soled shoes being best for the health in all seasons. The uppers can be of light or heavy leather, according to the time of the year. Great care should be taken that the vital parts of the body, the chest and the abdomen, are



sufficiently and evenly covered. Evening dress, exposing the chest and shoulders, should only be worn in houses where the temperature is kept at summer heat. A certain amount of risk is always attendant upon the change from ordinary street garb to evening dress.

Clothing should be warm and light in winter; light but not exposing in summer. At all times it should give free play to the limbs, being so far identified with the body that it is not an encumbrance.

#### EXERCISE

THE American people, as a whole, have realized only of late years the value of systematic exercise. Formerly, little or no attention was paid to the cultivation of the body, except by professional athletes. Now gymnasium systems have been introduced into the majority of public and private schools and institutions. Military drill and gymnastic exercises, out-of-door games like golf, tennis, polo, football, basket-ball, etc., all bear witness to the awakening interest in athletics. But to many persons, especially those shut up in cities, these forms of exercise are not possible. There are other forms, however, which can be practiced, and should be practiced under all circumstances.

The daily walk of from one to two miles should always be taken if health is to be preserved. In walking, keep the head erect, the mouth closed, the chest raised, the weight of the body poised upon the ball of the foot. Learn to breathe deep while walking, so that the full benefit of the fresh air may be obtained. Keep the thoughts upon outward objects, whether in city or country, so that the mind may be refreshed. A country walk affords a thousand interests and pleasures not to be found in the city; but the city walk is rich in human interest. In addition to the daily walk, some simple gymnastic exercises can be practiced just before retiring, or after the morning bath. Even the slightest of these exercises will aid in strengthening the muscles, and assist the circulation of the blood.

## THE EDUCATIONAL VALUE OF PHYSICAL TRAINING

---

*By W. J. HILLS*

*Secretary of the Gymnasium of Columbia University.*

TRAINING is a more comprehensive term than exercise, in that exercise is possible without training, while training is impossible without exercise. Yet in all exercise there is educational value, which is as varied in degree as the movements themselves differ in character. The exercises of pushing dumb-bells and pulling chest weights, for example, would hardly be considered educational in their nature, since the mind operates little upon the event. Their effect is, in the main, a physical one: increase of muscular power, change of blood currents by drawing upon the flow to the brain to flush the extremities, increased strength of the heart muscle, and a better supply of pure blood to the nerve centers. On the other hand, ball in all forms, particularly lacrosse, which is a high type of this sport, has a considerable educational value. The training of the eye, the judgment of speed and of distance, the equal coördination of the body by the use of the right and the left hand in the delivery of the ball, are some of the many results of practice in this game.

The handling of the body in gymnastic feats on such apparatus as the bars, the horse, and the buck, introduces in a large degree the element of training and requires great persistence and patience to keep the knees and the hips straight, to hold the foot with the toes turned outward instead of inward, to correct, in short, any slight irregularity of movement.

As the nerve lines in the fingers of the piano player, by constant practice, come to act from the ganglia, or nerve centers, without direction from the brain, so the complete coördination of the body is brought about only after such hard and persistent education or training in these matters of detail. This education assumes a practical aspect to the world at large when viewed in the light of its training value for business life. That such training is a useful preparation for



life's activities is a new idea, but it is undoubtedly well-taken. Sooner or later every man finds that persistence, patience and hard work are necessary to his business success, and that he must just as surely acquire a patient, hard-working habit in order to succeed in life.

Convinced of the amount of labor demanded to overcome every little irregularity of movement, the gymnast has learned one of life's greatest lessons. The examples are numerous where timid, retiring, backward young men, lacking all courage and confidence in self, have been entirely changed by participation in athletics. After a period of training, such a lad becomes master of himself; he enters into competition with his fellows; and soon gains confidence in his ability to become master of others. If he shall continue to train in life, that is, to live normally in all respects, he will be a better man, not only physically but also morally, since he will have acquired from his training many such benefits as retention of self-confidence, which will give him an advantage in the struggle of life.

The question of gymnastics *versus* athletics has been the subject of no little discussion for some years past. It may be said on the one hand that gymnastics can be more easily prescribed to meet peculiar needs and conditions; are at all times easily brought under regulation and control; and may be so modified as to prove an un-mixed good. Sports and games, on the other hand, are necessarily arbitrary in nature and are less susceptible to the needs of their participants. The effects of athletics are so diverse that it may be well, at this point, to consider them somewhat at length.

Sports may be classified under three heads: 1, Individual antagonistic; 2, team contests; 3, racing. The first group includes games in which two or more men participate, each depending upon his own individual effort, and that of short duration. The group may be subdivided according to the character of the sport, as follows: *a*, Golf, tennis, handball, rackets, all of them light-action movements attacking alternately a ball; *b*, fencing, boxing, wrestling,—sports of direct personal contact; *c*, shot-put, hammer-throwing, high and broad jumping, discus-throwing, pole vaulting, heavy gymnastics, etc.,—all requiring extreme effort of short duration.

In the second group, team contests, a given number of men contend against an equal number, each with a distinct part to perform. The subdivisions of this group are two: *a*, Cricket and baseball, where one team rests and the other performs the bulk of the work, while the plays require skill rather than strain, and the duration of effort is short; *b*, basket-ball, lacrosse, the various polos, hockey and football, where both teams play at the same time for a given period.

The third and last group, racing, comprises *a*, rowing, running,



swimming, bicycling, etc., where the single individual is competing against one or more, doing the same act continuously for a given distance or length of time; *b*, contests in which all the players on each side are performing the same thing at the same time, such as tug-of-war and crew rowing.

From this established basis, let us proceed, in a like sane and methodical manner, to analysis and conclusion. We shall select hand-ball as the best type of division *a* of the first group. The game is not one-handed like the game of tennis, and it brings all parts of the body into play. It cultivates quickness of action, mental acumen to the highest degree, judgment of distance, direction, angle, instant application of force, and decision as to where the ball shall be returned out of reach of the opponent. It should be classed as a valuable game for boys, giving perfect coördination without an undue amount of danger from overstrain, since it is always within the power of the player to limit his action.

As a type of subdivision *b* of this same first group—contests in which two men oppose each other—we would select the sport of boxing. Under proper regulation, it may be considered one of the best general exercises in physical training for schools. The entire muscular system is under tension at all times. The brain is kept very sharply awake studying the opponent, anticipating his movements, and endeavoring to find an opening for attack or repulsion. The activity, excitement, and continuous tension make a demand upon heart and lungs which easily becomes very severe. But it is at times within the power of the individual to fall back upon the defensive and thus relieve the pressure if it becomes too great.

Some have objected to boxing on the ground that it makes the boxer pugnacious and quarrelsome, but the fact of the case is quite the contrary. Whatever else he may learn, the boxer will find that to lose his head is to lose everything, and this lesson has accordingly a most beneficial effect on the hot-headed boy. Further, he has in his hands a ready weapon, if made effective with training, for self-preservation and protection in time of need. To sum up, boxing develops quickness of eye, thought and action, self-possession, confidence and courage, and a high degree of coördination, or balance; it is a delightful exercise, full of interest and skill, requiring the use of both hands freely, develops the heart, expands the lungs, improves the carriage, opens the pores of the skin, and, in short, is most valuable. Boxing is, therefore, superior in some ways to fencing.

We dismiss the next two subdivisions—*c* of group 1 and *a* of group 2—as passably suitable for high school boys. Cricket and baseball especially have a high educational value.

In the class of sports comprising lacrosse, the various polos, hockey, basket-ball, football, etc., more than in other games, is there a necessity of harmony and coöperation among the players; the boy must lose his identity and become a part of one great whole. He must obey implicitly the orders of his captain, and at the same time be alert to carry out his part of the game successfully and vigorously. He needs to be ready to change on the instant from attack to defense; he must keep the field of operation constantly in mind, take advantage of every opening, fill every gap, and put his whole heart and soul into the game. He must be aggressive, fearless and energetic in attacking his adversary and ready to sacrifice himself at the altar of duty by springing into such a position as to receive the attack and thereby protect his comrades. Such sports bring out the stamina of the lad. The greater the element of danger in a game, the more forcibly does it operate to develop these characteristics, so that we would place football highest in the category of the sports. The strain upon the heart is relieved and lessened by the intervals and breaks in the game caused by the various rulings and regulations in its government.

We now arrive at the third and last group, which includes racing in general. In all such events the strain is continuous from the beginning of the race to the end, and the plucky lad, full of courage and spirit, will not stop until the goal is reached, no matter how great is nature's outcry. One of the most unfortunate conditions of these contests is that the boy does not prepare for the worst before he must tax himself to the limit. There is added danger from the fact that every one of the team is controlled by the strongest of them all. In the examination of young men entering college, we find cases where the action of the heart is uncertain, irritable, irregular, with faint lesions due to early-followed and excessive athletics, and usually to those of the group last mentioned. The injuries from this class of sports are covert, more permanent and more serious, and the compensation at least questionable; while the injuries received in football are external, readily diagnosed, and usually of a temporary character.

We may, then, recommend the games of groups 1 and 2, with the exception of wrestling, since they create a healthy rivalry, are valuable factors in education, and tend to improve the health with the minimum danger of serious injury. On the other hand, all games that require a continuous and especially severe strain upon the heart, such as running, swimming, rowing, skating, cycling, tug-of-war, etc., these—but only in contests—may well be eliminated from the activities of our growing boys.



## PHYSICAL TRAINING

## I. GENERAL, OR FREE, MOVEMENTS

A GOOD posture during exercise is of prime importance. In the fundamental position, which should be maintained so far as the directions permit, the heels are put together; the body and the head are erect without being stiff; the hips are drawn slightly backward; the chest is well raised; the arms hang loosely at the sides; the weight of the body is thrown forward on the balls of the feet.

## EXERCISES FOR THE ARMS AND THE SHOULDERS

1. The arms are raised forward and parallel to each other to a vertical position, and are then lowered again. The exercise must be taken rapidly and with vigor. At the start, the palms, or inner surface of the hands, are turned to the rear.

2. The previous exercise is varied by allowing the momentum to raise the body on tiptoes.

3. With the palms turned toward the thighs at the start, the arms are raised sidewise until the backs of the hands meet above the head, and are lowered again.

4. The arms are raised forward shoulder high, the palms turned toward each other. From this position the arms are swung outward, closed in front, and lowered again.

5. The position at the start is with the arms raised sidewise, shoulder high, the palms turned upward. The movement consists in forcibly turning the palms over and back.

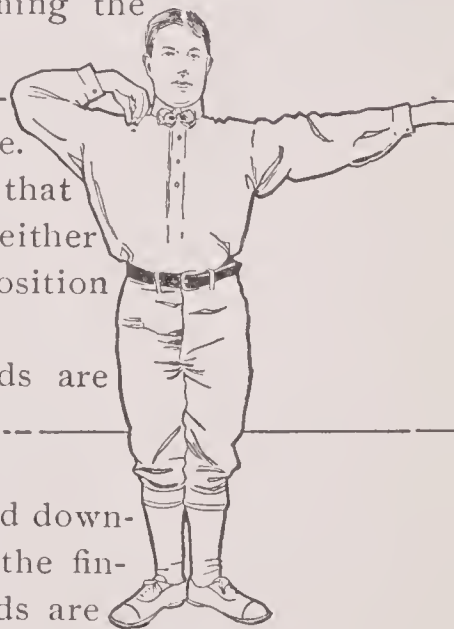
6. The forearms are flexed so as to bring the fingers on the shoulders; the upper arms are horizontal; the elbows pointed sidewise. From the bent position, the arms are vigorously extended sidewise, so that they become straight and horizontal. The exercise may be taken with either arm alone; or alternately, so that one arm passes to the bent position while the other is being extended (Fig. 1); or simultaneously.

7. From the starting position of the previous exercise, the hands are thrust in a straight line upward from the shoulders, simultaneously, alternately, or with either hand alone.

8. The arms are raised sidewise, shoulder high, the palms turned downward, the fingers, the wrist, and the elbows, extended. The tips of the fingers then describe a small circle, causing the arms to rotate; the hands are raised forward and over, which will expand the chest instead of compressing it. (Fig. 1.) Repeat with the palms turned upward.

9. The fingers are forcibly spread apart and afterward tightly clinched inward against the palm. The exercise is refreshing when the hands are tired from writing or sewing.

The important effect of the arm movements is the raising of the chest walls, which enlarges the capacity within the chest, and thereby increases the space for air supply. Besides promoting activity of respiration, they are useful in cases of relaxed carriage, and of defects in the formation of the chest. The raising and the lowering of the arms also brings into action one of the most important muscles of respiration, namely, the diaphragm,



(Fig. 1.)



lying between the chest and the abdomen. Through the massage, so to speak, by this muscle, the organs of the abdominal cavity are mechanically stimulated into activity.

### EXERCISES FOR THE NECK

10. The head is bent forward until the chin lightly touches the chest. After remaining a moment in this position, the head is raised and bent backward. Without the least movement of the shoulders, the head is then bent sidewise, left and right, and again raised upright.

11. The head is first bent forward and then rotated sidewise to the left, then backward, then sidewise to the right, and again forward; the face remains turned toward the front or upward throughout. A common fault is to move the upper part of the body, especially the shoulders, as the head is rotated.

By strengthening the muscles of the throat and the neck, these movements tend to improve the carriage of the head and the chest. A further benefit is gained by raising the chest and thereby increasing the depth of inspiration.

### EXERCISES FOR THE TRUNK

For the following exercises, the hands rest on the hips, the fingers to the front, the thumb to the rear, and the elbows pointed sidewise.

12. The trunk is bent alternately forward and backward as far as possible, with straight knees; the head should be kept erect by directing the eyes to the opposite wall. (Fig. 2.)

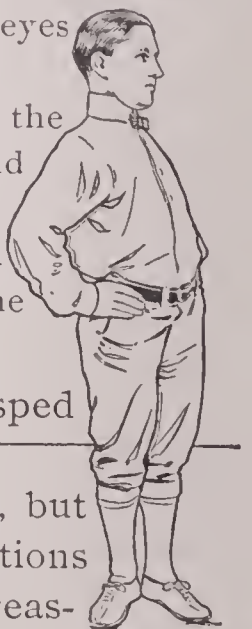
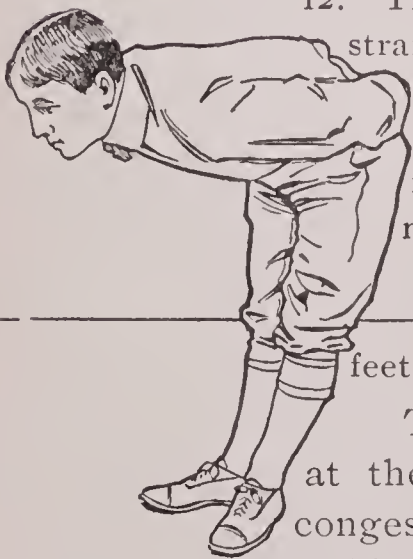
13. The trunk is bent alternately to the left and to the right; the head follows the movement of the trunk, but should not turn aside in either direction.

14. The head and the upper body are turned while in the upright position alternately left and right, while the feet remain planted firmly on the floor. (Fig. 3.)

The movements may be repeated with the hands clasped at the back of the head. A slight pain, resulting from congestion, may be caused when bending the trunk forcibly, but (Fig. 2.) this is relieved by the opposite flexion. Trunk flexions exercise the rib muscles, widening the chest and thereby increasing its capacity; they help to flatten the shoulder blades, and to (Fig. 3.) straighten the spine in cases of curvature. Under the latter condition, the bending must be to one side only. The movements have also a churning and exciting effect upon all the organs of the abdominal cavity and are useful in cases of hemorrhoids and of constipation.

### EXERCISE FOR THE LEGS

The tendency to lean forward must be guarded against, as the strain is thereby greatly lessened. Those who find difficulty in maintaining an erect position of the body may, in the beginning, rest the hand on some support. Otherwise the hands should rest on the hips.

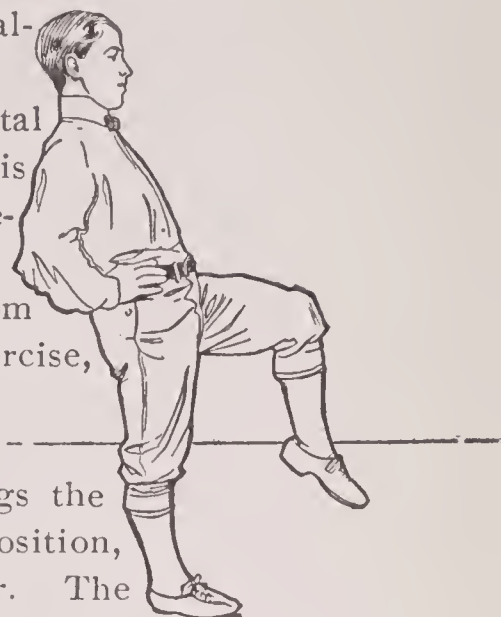


15. Either leg is raised forward to a horizontal position and lowered again. Either leg is then raised sidewise and also backward as high as possible, always without bending the knee.

16. Either knee is bent and raised so that the thigh is in a horizontal position; the lower leg hangs perpendicularly down, and the instep is stretched so that the toes point downward. (Fig. 4.) The entire movement, including the change of feet, is performed quickly and easily.

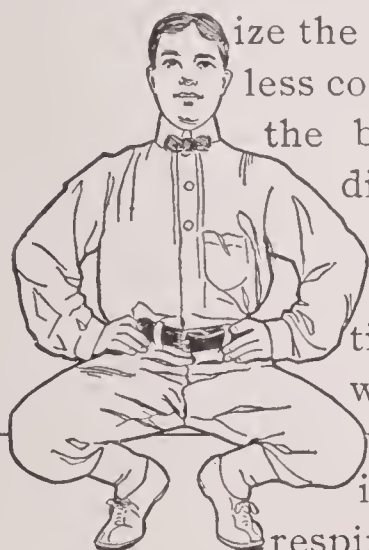
17. Either leg is raised forward horizontally, and, while elevated from the floor, the knee is quietly, but vigorously, bent as in the previous exercise, and extended again.

18. Both knees are bent slowly until the body sinks to a sitting position, and at the same time the heels are gradually raised, which brings the weight of the body on the toes. (Fig. 5.) After a moment in this position, the knees are slowly straightened and the heels lowered to the floor. The erect position of the upper body should be maintained from the beginning to the end of the movement.



(Fig. 4.)

Exercises with the legs are particularly quieting, and are useful to equalize the circulation after long mental activity. The brain has less control over the blood supply than the other organs of the body, for its weaker arteries possess less power to discharge the blood after its life-giving elements have been received. A very wise and economical way, however, has been provided to relieve the congestion, for the blood leaves the brain readily enough when there is a demand created for it in another part of the body. When the circulation is equalized in this manner, the effect is noticeable in easier respiration, and sleep follows naturally. Where balance

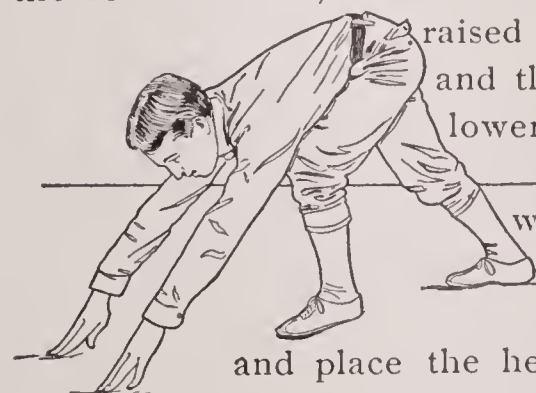


(Fig. 5.)

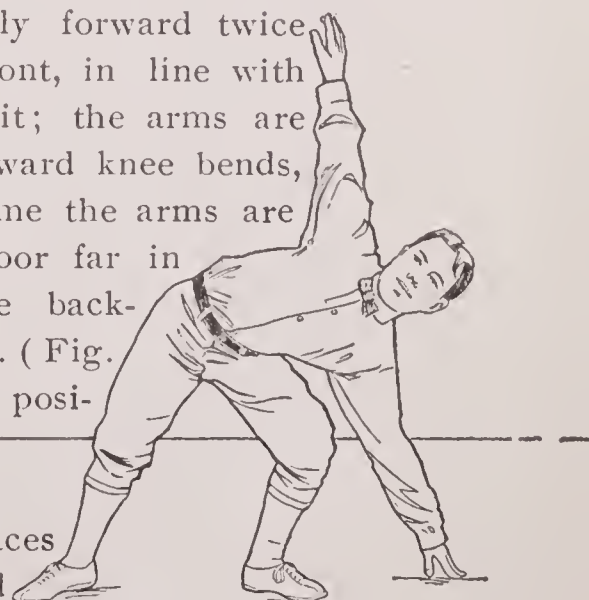
enters into the leg movements, high coördination, rather than force, is required to maintain the equilibrium of the body, and continuous practice helps to correct a poor posture. From their proximity to the abdomen, the legs may be exercised in cases of stagnation with benefit to the organs.

#### EXERCISES COMBINING THE ARMS, THE TRUNK, AND THE LEGS

19. For the starting position, either foot is placed directly forward twice its length; the weight is equally divided; the body faces front, in line with the forward foot, while the other foot forms an angle with it; the arms are raised vertically. In this position, the forward knee bends, and the body stoops; and at the same time the arms are lowered until the fingers touch the floor far in advance of the bent knee; the backward heel should not leave the floor. (Fig. 6.) After resuming the upright position, lower the arms to the side



and place the heels together.



(Fig. 7.)

(Fig. 6.) 20. Either foot is placed sidewise; the body faces the front; the weight is evenly divided; the arms are extended sidewise, shoulder high, the palms turned downward. (Fig. 7.) The



movement consists in bending the knee and stooping sidewise for one hand to touch the floor; both arms remain extended and parallel.

21. The first composite exercise is repeated in detail, except that the foot is placed obliquely forward instead of directly forward.

22. For the starting position, either foot is placed directly forward; the arms are extended sidewise, shoulder high, the palms turned upward; the weight of the body rests on the backward, or supporting, leg. The trunk then bends backward and at the same time the arms are raised and the hands clap above the head. When the trunk is straightened, the arms are lowered again, shoulder high. A common fault is to bend the elbows or the knees, as the body is bent backward.

### GRASSHOPPER JUMPS

A number of positions with the arms may be taken which will change the tension of the muscles and afford an opportunity to repeat the exercises with greater variety. The hands may be placed on the hips or clasped at the back of the head; or the arms extended sidewise, shoulder high, the palms turned downward; or, raised vertically with the palms turned inward, the arms may be lowered sidewise, shoulder high, and raised again according as the legs are spread apart or brought together.

23. An upward leap is made and the legs are quickly spread apart sidewise so that the feet alight at about eighteen inches distance, in a straddling position; the fore part of the feet should touch the floor at the end of the jump; the knees are slightly bent so as to break the force of the descent.

24. After a vigorous leap upward, the legs quickly spread apart crosswise, so that the descent ends in a stride position, one foot before the body and the other behind it. On the second jump, the backward foot lands in the forward position.

### RUNNING ON PLACE

25. The so-called mock-running is hopping from one foot to the other without a forward movement from place. The body should not, by this time, have lost its erect position, with the chest prominent; the hands are placed on the hips. There are three ways of running, all of them of great value as heart developers and chest expanders. The first is an easy dog trot; in the second mode of running, the lower leg is swung backward and raised so high that the heel touches the flank; the run of ascent, corresponding to hill-climbing, requires that the knee be raised high enough forward to bring the thigh up to a horizontal level.

Active jumping and running develop elasticity in the body and invigorate the muscles of the legs in such a manner as to give a springing step in walking. The vigorous shaking of the internal organs which accompanies the exercise produces effects similar to those of horseback riding. The motion powerfully urges the blood into the lungs where its waste products are readily eliminated by the rapid exhalation. The action of the liver is also hastened, and the channels of excretion are kept free and open.

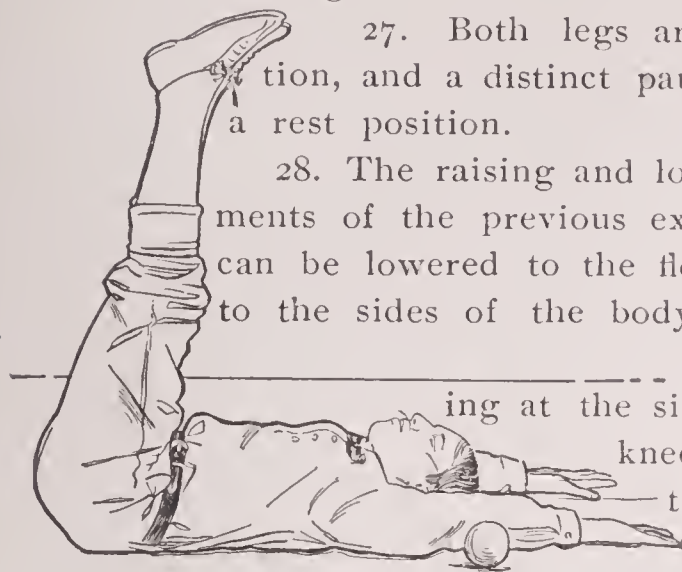
### EXERCISES FOR THE ABDOMEN

In the starting position, the body lies flat on the back, the arms resting by the side and the palms turned downward.

26. Either leg is raised and lowered slowly, with straight knee.

27. Both legs are raised slowly, at least to the vertical position, and a distinct pause is made before they are again lowered to a rest position.

28. The raising and lowering of the arm accompanies the leg movements of the previous exercise. After several days practice, the hands can be lowered to the floor at back of the head before being returned to the sides of the body. (Fig. 8.)



(Fig. 8.)

29. Both legs are raised, the arms remaining at the sides; while elevated from the floor, the knees are bent and the thighs lowered toward the body; the legs are again straightened and lowered to the floor.

30. The previous exercise is varied by bending and straightening the knees alternately in treadmill fashion. (Fig. 9.)



(Fig. 9.)

31. The trunk is raised to a sitting posture, the chest is well arched and the arms hang loosely at the side. From this upright position, the trunk is lowered slowly, without lifting the legs, and is then raised again. If necessary, for the first trials, the toes may be thrust under a piece of furniture to weight them down.

32. The trunk is lowered from a sitting position half-way to the floor and then raised again.

33. Exercises 31 and 32 are repeated with the hands clasped at the back of the head.

In the starting position, the body is stretched flat on the stomach, the hands clasped on the seat.

34. Either leg is raised slowly, with straight knee, and is then lowered again.



(Fig. 10.)

35. The trunk is raised from the waist without lifting the legs and is then lowered to the floor. (Fig. 10.)

36. After being extended on the floor above the head, the palms turned downward, the arms are raised with the trunk, and then lowered to a horizontal position; the tendency to duck the head and tip up the legs will be overcome by practice.

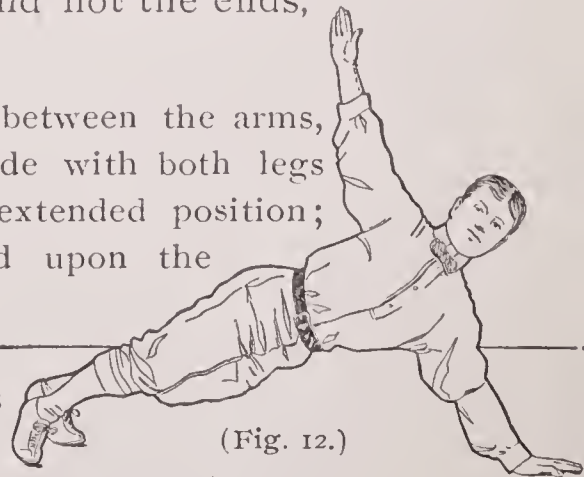
For the following exercises the body is supported by resting the toes and the palms upon the floor; head, trunk, and legs, should be in the same straight line; the arms are at full length; the under side, and not the ends, of the toes rest on the floor.

37. Either leg steps forward, so that the bent knee comes between the arms, and is then extended again. (Fig. 11.) A forward jump is made with both legs and then a return jump to the extended position; the hands remain firmly planted upon the floor.



(Fig. 11.)

38. Either hand is lifted from the floor and the arm is raised sidewise as high as possible; as it swings upward, the arm should turn



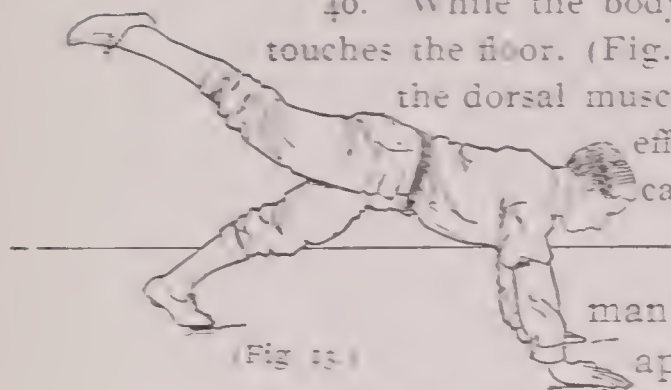
(Fig. 12.)

the body over so that it rests sidewise on the supporting arm and the feet. (Fig. 12.) After a moment the arm is lowered to its first position.



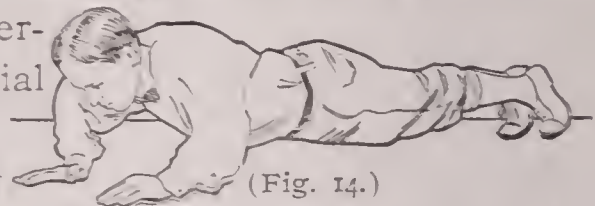
39. Either leg is raised sidewise without turning the body over (Fig. 13), and is then lowered again.

40. While the body remains in a straight line, the arms are bent until the nose touches the floor. (Fig. 14.) This exercise, known as dipping, invigorates principally the dorsal muscles, although the whole muscular system shares in its beneficial effects. It is consequently helpful in cases of relaxed or faulty carriage and of lateral curvature of the spine.



(Fig. 13.)

The most welcomed result of abdominal exercise to many is a decrease in fat at the waist. Curious as it may appear, the waist is made actually smaller and a natural muscular corset is formed, as effective and certainly much less injurious than any artificial support. The alternate pressure and release brought to bear upon the internal organs by these movements first of all excite the secretion of the juices of the stomach so as directly to aid digestion. The peristaltic action of the intestines also is benefited by such muscular action. Constipation is, in fact, chiefly a lack of muscular tone, so that any activity in the region of the abdomen is helpful in cases of this sort.



(Fig. 14.)

## BREATHING EXERCISES

41. The arms are slowly raised forward or sidewise to a vertical position as the breath is inhaled, and are then lowered again during exhalation.

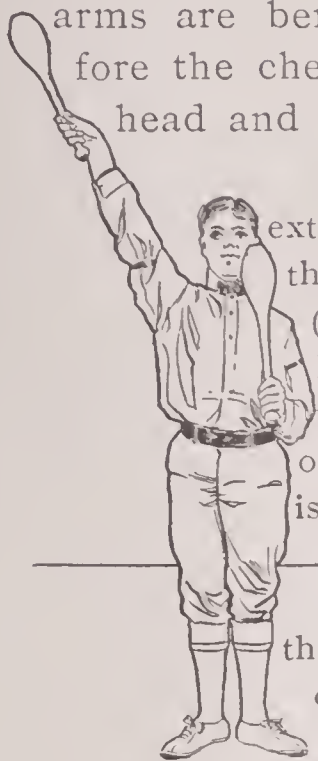
At the end of a series of exercises, or after any exertion, a pause may well be made for deep and quiet breathing. As the flow of blood through the heart has been quickened by such activity, a full exhalation is needed to remove the waste products given off in the contraction of the larger muscles. A greater air space then remains for a supply of oxygen, with which the rapidly-flowing blood becomes heavily charged. The time-honored advice to retain the breath during exertion, or to beat the chest when it is fully inflated, or to swell the abdomen during breathing exercises is no longer given. Such a course retards the blood currents, increases the pressure on the channel walls, and checks the flow of the blood upon the venous side of the system, with injurious effect.

## 2. THE INDIAN CLUB

A PAIR of light clubs, varying from one to two pounds in weight, in accord with the size and the strength of the individual, will be found more desirable at the start. The chief requisites of good club-swinging, namely, accuracy of movement, roundness, and ease, cannot be gained by exhaustive exercise with heavy clubs. The English variety, known as the Liverpool gymnasium club, and variously called by their different manufacturers the bulb, or the scepter, club, is perhaps the most popular where it is known. The weight in this style is placed low, so that the handles are long and slender.

The clubs should be grasped firmly, close to the ball; the thumb may be extended along the shank as a means of keeping better control of

the motion. In the starting and the ending positions of all movements, the arms are bent so as to hold the clubs upright, about six inches before the chest; the body should maintain a correct posture with the head and the shoulders turned squarely to the front.



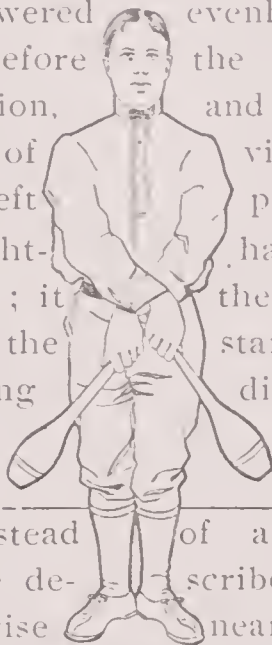
(Fig. 15.)

1. The outward arm circle.—The right, or the left, arm is extended at the side, obliquely upward. (Fig. 15.) The club is then dropped at arm's length sidewise, swung first past the knees (Fig. 16), and then upward to the oblique position, where it is lowered to the start. A common fault is to let the momentum of the club twist the body aside. The circle is described on count one and the club is lowered to the front on count two; the arm is extended again in the interval before count one is given a second time.



(Fig. 16.)

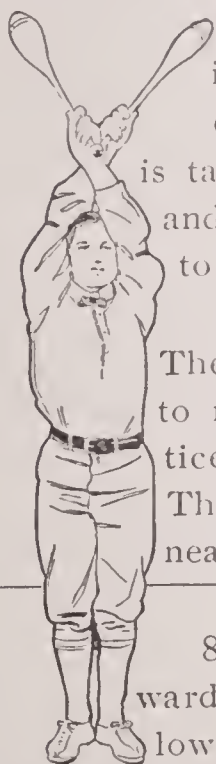
2. After the separate movement with the clubs is familiar, the exercise is performed with both clubs. The arms are extended obliquely upward, forming with the trunk a letter Y; next, the clubs are lowered evenly, so that they will pass each other directly before the body (Fig. 17); they then continue the circle to the oblique position, and finally are brought to the front. Considered from another point of view, the clubs always pass in a plane parallel to the right and left plane of the body.



3. Inward arm circle.—The right-hand club is swung from the oblique position to the left, above the head; it then describes a complete circle, parallel to the plane of the body, to the starting position. The left-hand club is then swung in a corresponding direction.

4. Both clubs describe inward circles, crossing each other directly before the upper body. (Fig. 18.)

5. Outward hand circle.—Instead of a sweep before the body with straight arms, the hand circles are described behind the back with the elbows bent. Either club is raised sidewise near the head and slightly back. The club is then dropped sidewise (Fig. 19) and a twist of the wrist given to carry it around in a circle behind the back (Fig. 20); the hand is returned to the starting position on count two.



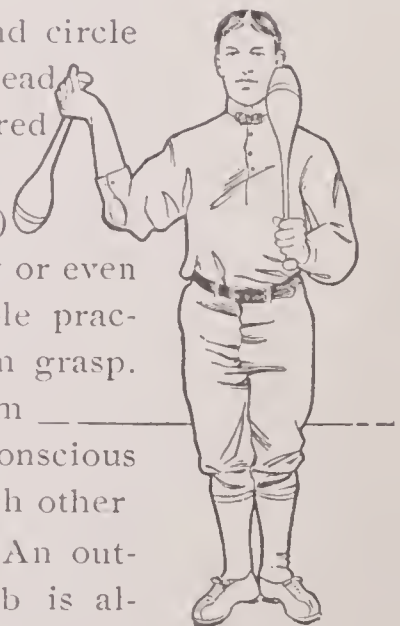
(Fig. 18.)

6. Inward hand circle.—The first position for the outward hand circle is taken, after which the club is started inward behind the head and twirled around in a circle until upright, and is then lowered to the front.

7. Each hand circle is performed with both clubs. (Fig. 21.) The beginner cannot expect to execute these movements gracefully or even to round the circles fully, in every direction, without considerable practice. He may at least try to swing smoothly and with a firm grasp. The secret of avoiding collision with the clubs is to cross them near the hands, since the clubs are smaller at that point. Be conscious then, of bringing the hands together as the clubs pass each other

8. Either club is extended at arm's length, obliquely upward. An outward arm circle is described to the upright position and the club is allowed to pass directly to an outward hand circle, that is, behind the head.

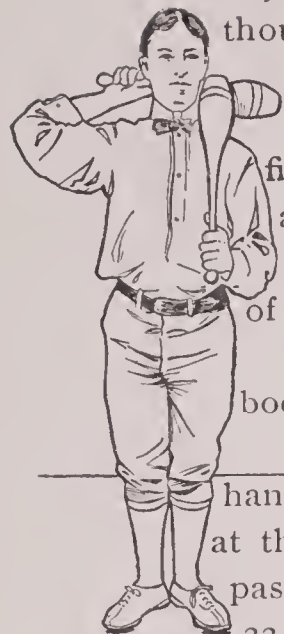
(Fig. 18.) Since the direction of the circles is the same, the momentum gathered from circling before the body will easily carry the club around behind the shoulder.



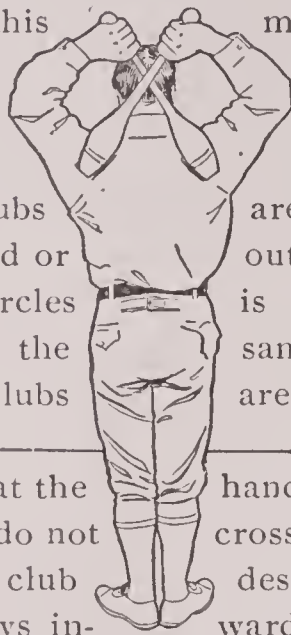
(Fig. 19.)



9. The previous exercise, when performed with both clubs, is a very graceful, though difficult, movement. Outward arm and hand circles are combined as each has already been arranged for two clubs.

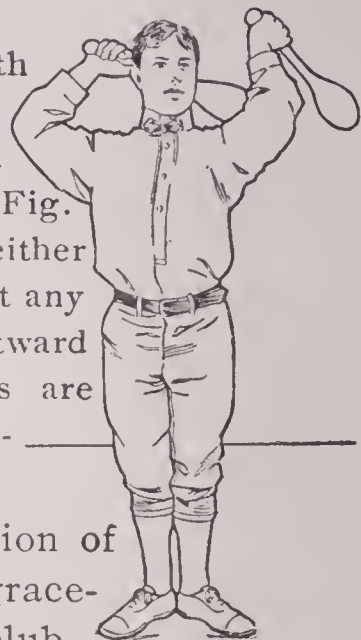


10. In a similar manner, the inward arm and hand circles are joined, at first, for one club. After this movement is mastered, both clubs are used. The oblique position is always the point where the clubs pass from the variety of arm circles to the same variety of hand circles.



11. Double circles.—Both clubs are raised at the same side of the body and then circle either inward or outward.

12. Either variety of arm circles is combined with hand circles in continuation of the same direction; at the end of the arm circles, the clubs are separated and pass on opposite sides of the head to the back. (Fig. 22.)



(Fig. 20.) 22.) A little thought shows that the hand circles are neither outward nor inward, for the clubs do not cross each other at any point. Quite the opposite; one club describes an outward hand circle, while the other follows inward. The clubs are therefore parallel, which alone need concern the performer. (Fig. 21.)

These four elementary circles comprise the foundation of all club-swinging and readily combine in innumerable graceful movements that may be developed by an expert club-swinging. While they are too complicated to be described in this place, some of them may suggest themselves and be made to form an interesting addition to the above exercises. (Fig. 22.)

### 3. THE WOODEN DUMB-BELL

THE modern dumb-bell consists of two spheres connected by a handle. This description seems simple enough, but correct forms are seldom seen in the shops. The wooden bell of average size is about ten inches in length, the handle being three and three-quarters inches long and nearly an inch through, and the bells, or balls, about three inches in diameter. There are various weights, however, running from four ounces to two pounds, and thus suitable for persons of any age and physical condition.

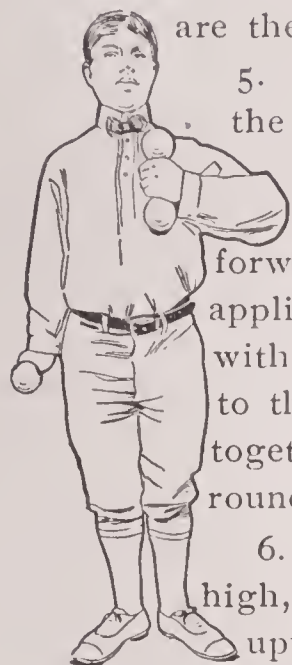
At the start, the bells are grasped firmly in each hand and rest close to the sides, at arm's length, the palms turned inward; the body must remain in a correct standing position. The exercises should be performed with steady, continuous movements, and yet be executed with vigor and elasticity.

1. The arms are raised forward and parallel to each other to a vertical position, and are then lowered again.

2. The previous movement is repeated with the palms turned to the rear at the start.

3. With the palms turned toward the thighs at the start, the arms are raised sidewise until the thumb ends of the bells click above the head. The arms are then lowered so that the finger ends of the bells click at back of the body. The last movement is especially effective in forcing the shoulders back.

4. The arms are raised above the head, the palms turned inward. From this vertical position, the bells are lowered at arm's length, sidewise, shoulder high, and are then raised again before dropping to the side.

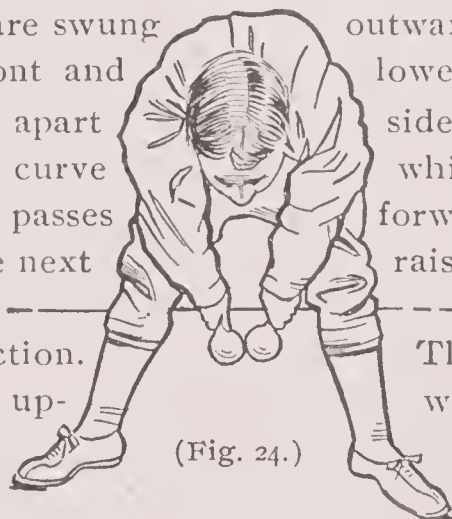


5. The bells are placed on the chest, the palms turned inward, and the elbows raised from the body so that the forearms are horizontal. By stretching the arms vigorously and quickly from the chest, with either an alternate or a simultaneous movement, the bells are thrust forward, sidewise, upward or downward, in a straight line. The last clause applies particularly to the side thrust, which otherwise might be made with a circular swing outward. The thrust downward should be made to the rear of the body. (Fig. 23.) By endeavoring to bring the elbows together at the back, the movement becomes very useful in case of rounded shoulders and narrow chests.

6. The position at the start is with the arms raised sidewise shoulder high, the palms turned downward. In this position, the hands are bent upward at the wrist, then extended in the original position and bent downward. The exercise has a similar effect to that of finger-spreading under free-hand movements.

7. The arms are lifted forward to the horizontal position, the palms turned inward. The extended arms are swung outward, raising the body on the toes, and are then closed in front and lowered.

8. The legs are moved apart sidewise in a straddling position, while the arms sweep in a curve to shoulder height, and then pass between the legs. (Fig. 24.) The bells are next raised forward and swung to the right side, shoulder high (Fig. 25); the head and the body turn naturally in the same direction. The bells are swung between the legs a second time, and then upward to the left side, shoulder high.



(Fig. 24.)

9. With the arms raised upward at the start, the heels joined, the trunk begins to bend forward, and at the same time the arms are lowered in front until the bells strike the floor; the knees remain straight. After rising again to the upright position, the arms are dropped to the sides.

10. The arms fully extended are lifted sidewise shoulder high, the palms turned downward. The movement consists in bending to either side while the arms remain parallel; the body should face the front.

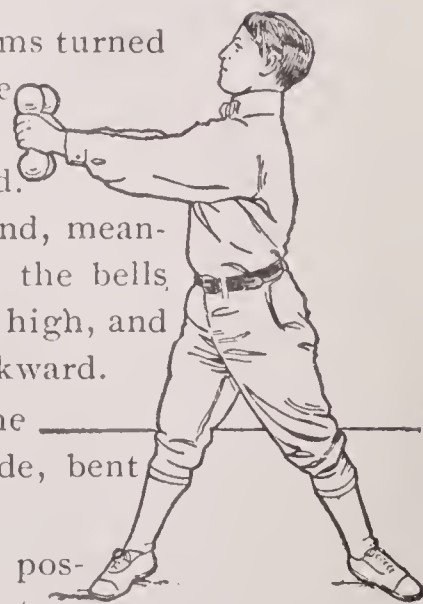
11. Exercises 19 and 20, under free-hand movements, are repeated.

12. While standing with the feet apart, the trunk bends forward and, meantime, the arms are lowered from a vertical position above the head and the bells are swung between the legs. The arms are then raised in front, shoulder high, and swung backward in a horizontal line combined with trunk bending backward.

13. In the starting position of the previous exercise, that is, with the legs straddling and the arms upright, the trunk is turned to either side, bent backward, and then straightened again.

14. The position of the exercise is with the knees bent to a sitting posture, the heels raised. While balanced on the toes, the bells are thrust in different directions as above, with an additional movement of thrusting both bells to the same side.

15. While balanced on either foot, with the supporting knee bent, the arms are raised forward to a vertical position and are then lowered again.



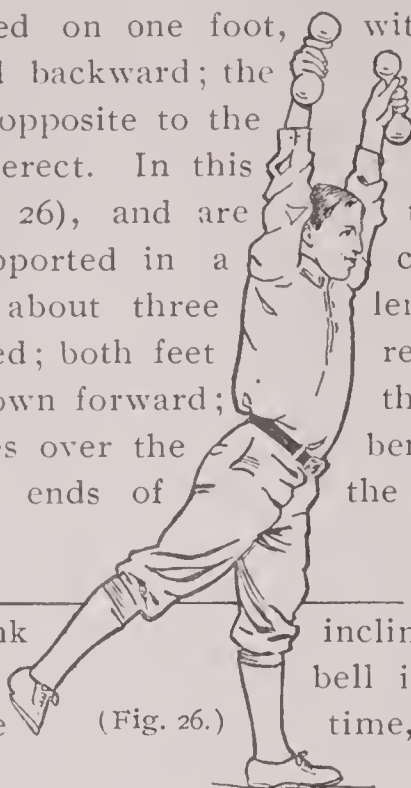
(Fig. 25.)



16. The body is poised on one foot, with the other foot raised from the floor and the leg extended backward; the trunk is slightly inclined forward and turned in a direction opposite to the supporting leg; the shoulders are well arched and the head erect. In this position, the arms are raised forward until vertical (Fig. 26), and are then lowered again.

17. The body is supported in a charge position; for this, either foot is placed forward about three lengths; the front knee is bent and the backward knee extended; both feet rest on the floor at an angle; the weight of the body is thrown forward; the trunk is erect, the chest well arched. The trunk inclines over the bent knee and the hands reach far forward until the thumb ends of the bells touch the floor, and then straightens forward again.

18. The previous exercise is taken in a side charge position. The trunk inclines sidewise over the bent knee and the thumb end of the bell is touched to the floor as far out as possible. At the same time, the other arm is raised in line with the first.

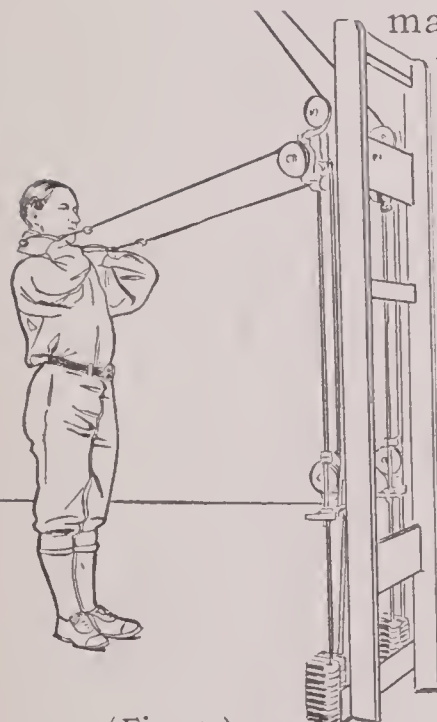


#### 4. THE CHEST WEIGHTS

THE more modern form of pulley weights has been described by a manufacturer as a "rope that passes under a pulley on the weight-holder, or carrier, and over another pulley to the handle or other attachment. By means of this arrangement, the weight travels only one-half as fast as the handles; the tension on the rope is constant, and the rope does not slack to be brought up with a jerk." There are also numerous weightless machines made by the manufacturers of such goods, which fill fairly well the place of the more expensive chest pulleys.

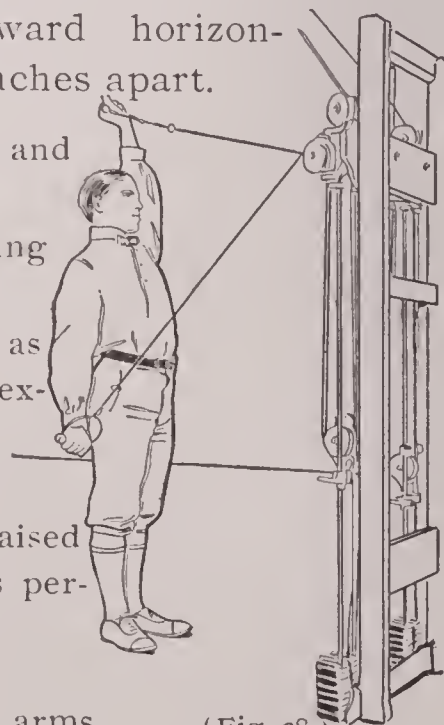
For the following exercises, the body faces the machine.

At the start, the handles are grasped firmly in both hands, the palms turned downward and the elbows straight. Several steps are taken backward until the weights are raised from the floor, when the arms are extended forward horizontally; the feet should be about eighteen inches apart.



(Fig. 27.)

1. The handles are pulled downward past the hips and are then returned to the horizontal position.
2. The movement is repeated with the hands grasping the under side of the handles.
3. The forearms are flexed on the upperarms so as to bring the handles on the shoulders, and are then extended again. (Fig. 27.)
4. Combine exercises 2 and 3.
5. With the palms still turned upward, the arms are raised until vertical and are then lowered to the front, the elbows perfectly straight.
6. Combine 2 and 5.
7. With the backs of the hands turned upward, the arms are swung in opposite directions from the horizontal position until one arm is



(Fig. 28.)

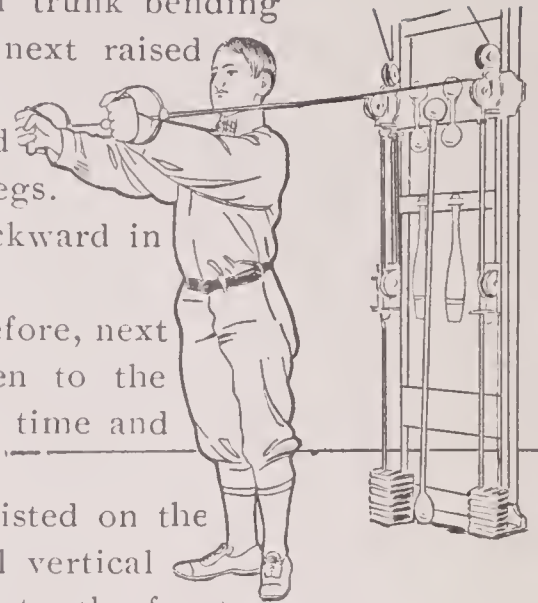
vertical above the head, and the other arm is vertical at the side. (Fig. 28.) The position of the arms is then interchanged and finally becomes horizontal.

8. The feet are moved sidewise in a straddling position. With trunk bending forward, the handles are then pulled downward between the legs, next raised until vertical and then lowered to the horizontal.

9. While standing with the feet apart, the trunk bends forward and, meantime, the handles are pulled downward between the legs. The arms are then raised in front, shoulder high, and swung backward in a horizontal line combined with the trunk bending backward.

10. The handles are pulled downward between the legs as before, next raised forward and pulled to the right side, shoulder high, and then to the front. The handles are pulled downward between the legs a second time and then upward to the left side, shoulder high.

11. While remaining in the straddling position, the trunk is twisted on the hips to the right and at the same time the arms are raised until vertical and are then lowered to the horizontal position as the body turns to the front. The movement is repeated to the left side.



(Fig. 29.)

For the following exercises, the back is turned to the pulleys. Several steps are taken forward so as to draw the weights off the floor when the arms are brought to the side of the thighs; the palms face the front.

12. The handles are pulled forward at arm's length until horizontal (Fig. 29) and are then lowered again as far as possible at back of the body. The motion of the arms should not be allowed to sway the body from an upright position.

13. The arms are bent so as to bring the handles on the shoulders; the elbows point sidewise, the palms turned to the front. (Fig. 30.) The handles are pushed forward in a straight line, so that the arms extend horizontally, and are then pulled to the shoulders again.

14. The arms are extended forward, shoulder high, the palms turned downward. From this position, the handles are pulled upward, with straight elbows, until vertical, and then down again.

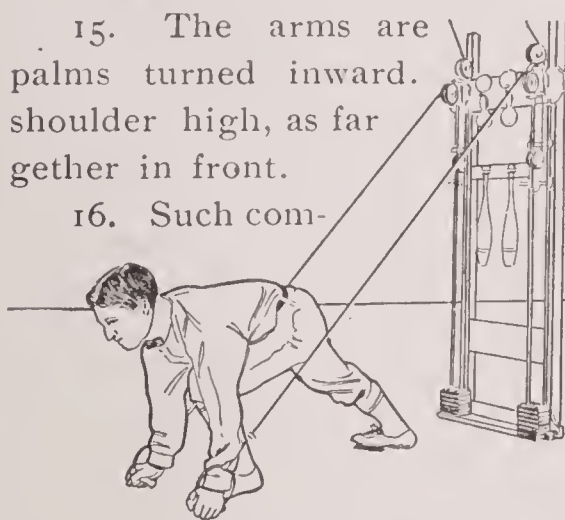
15. The arms are extended forward, shoulder high, the palms turned inward. The handles are next pulled sidewise, shoulder high, as far back as possible, and are then closed together in front.

16. Such combination movements may be made as exercise 13 with 14; or 13, 14 and 15; or 12 and 13, with deep knee bending to a sitting position during 12.

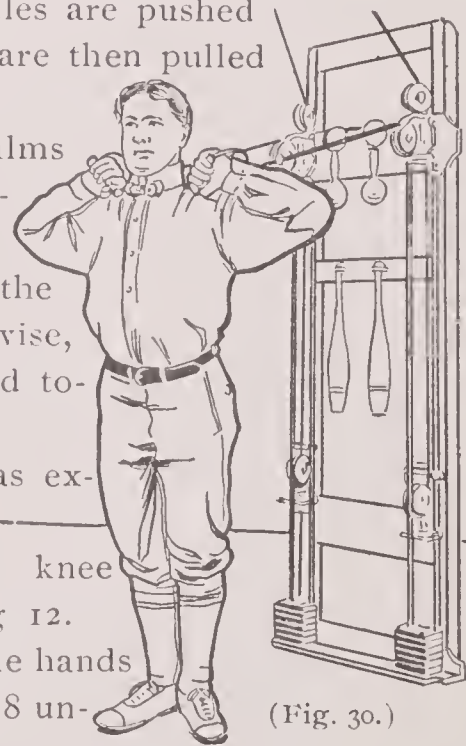
17. The arms are rotated with the hands grasping the handles as in exercise 8 under free-hand movements.

18. In the stride position of exercise 19, under free movements, the forward knee is bent; the trunk inclines forward; and at the same time the arms are swung downward past the hips. (Fig. 31.) After resuming the upright position, lower the arms to the side and place the heels together.

For the following exercises, a handle is grasped in the right hand and the usual position, a few steps from the weights, is taken, but with the right side toward the machine and the right arm extended sidewise, shoulder high.



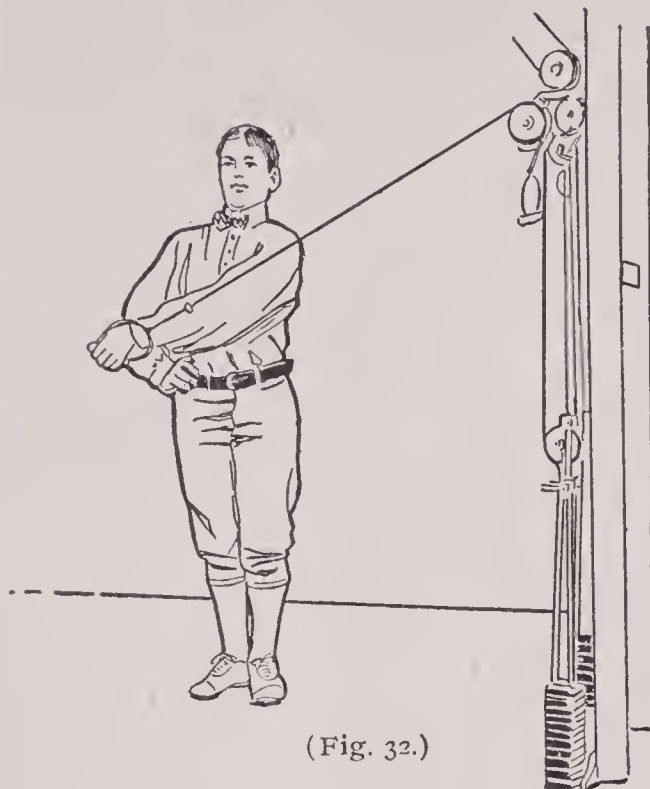
(Fig. 31.)



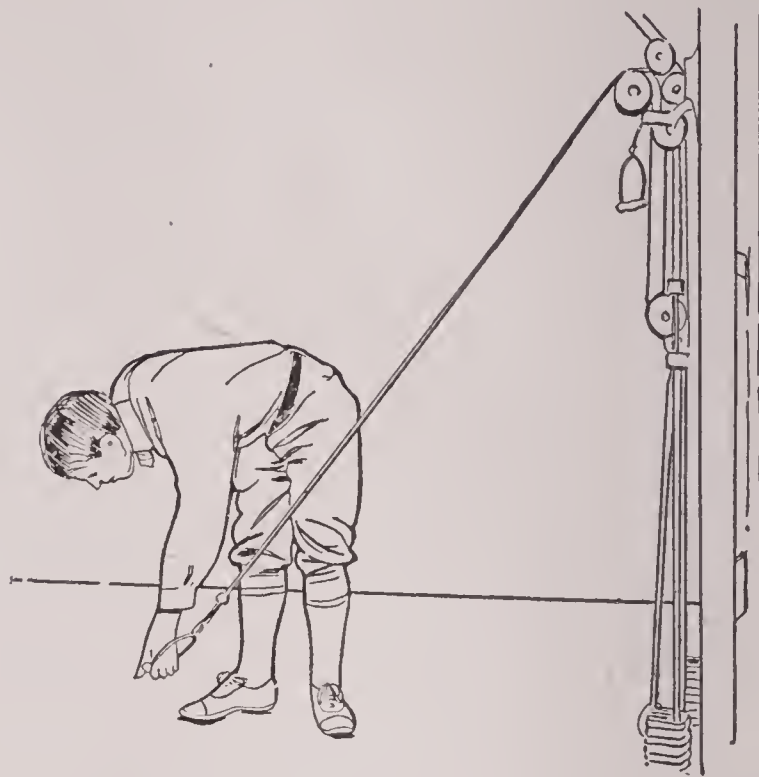
(Fig. 30.)



19. The handle is pulled downward past the hips in front of the body and is then returned to the horizontal position; the body should not turn in the least to one side. (Fig. 32.)



(Fig. 32.)



(Fig. 33.)

20. The previous movement is repeated at back of the body, with especial care not to turn the body aside.

21. With the handle turned over so that the palm faces upward, the forearm is flexed on the upperarm and is then extended again.

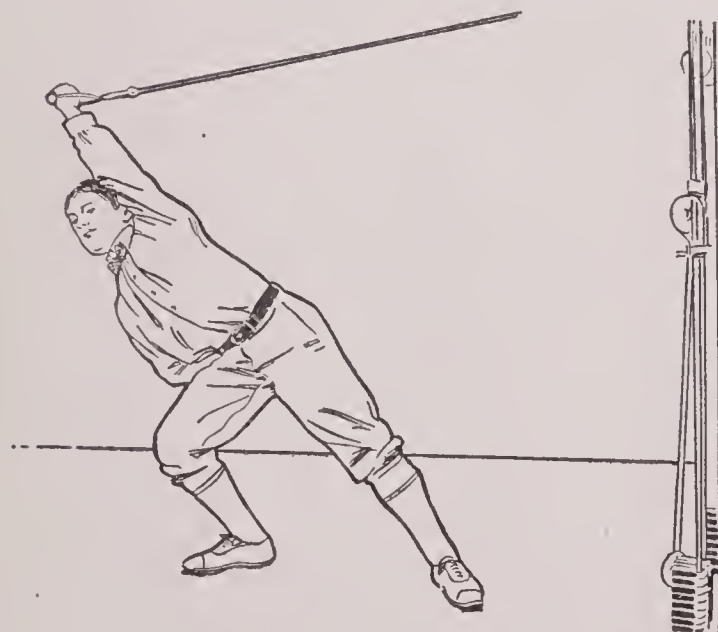
22. Combine 19 and 21 or 20 and 21.

23. With the palm still turned upward, the arm is raised until vertical and is then lowered to the horizontal position.

24. Combine 21 and 23.

25. The trunk is inclined forward over the left foot, with straight knees, and at the same time the handle is pulled downward at arm's length to the left toe, after which the body resumes the upright position. (Fig. 33.)

26. The legs are moved apart in a straddling position, and with a simultaneous movement the trunk is inclined sidewise to the left, the left knee is bent, and the right arm is raised with the palm turned upward until the right leg and the right arm are in the same straight line. (Fig. 34.)



(Fig. 34.)

After resuming the upright position, the series of exercises is repeated with the left side turned to the weights.

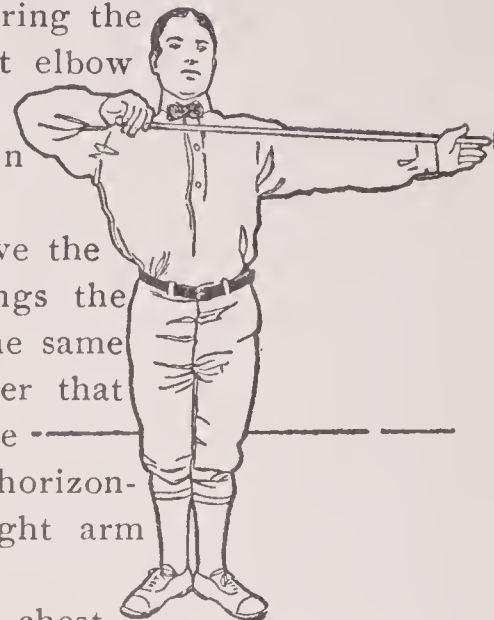
## 5. THE WAND

WANDS vary from three to four feet in length and are made of wood or of iron tipped with rubber. When made of iron, they average about five pounds in weight. The wooden wands are preferable for children, and a cane, or a broomstick, may be used for the purpose.

The wand is held close to the body with the arms extended downward; the backs of the hands are uppermost; the grasp is somewhat more than shoulder-width apart; it is only in stepping over the rod that the hands need to be nearer together.

1. The wand is swung upward to a horizontal position above the head and is then lowered again.

2. The wand is swung upward to the left, close to the body, until level with the shoulders (Fig. 35), is then lowered and raised to the right side. During the movement to the left side, the left arm is extended, and the right elbow is bent above the level of the wand. The grasp of the left hand should be loosed so that the wand may rest lightly in the crotch of the thumb.



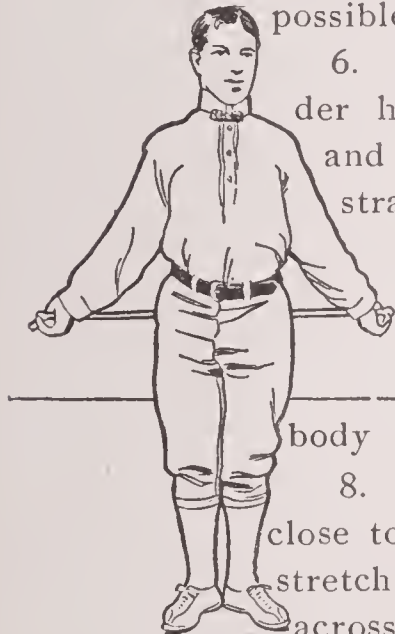
(Fig. 35.)

3. At the start, the wand is raised horizontally above the head. The left arm, which remains stretched, then brings the wand downward to the left side of the body, and at the same time the right arm bends over the head in such a manner that the upperarm becomes vertical and the forearm rests upon the crown. (Fig. 36.) From this position, the wand is raised horizontally and is then lowered to the right side with the right arm stretched while the left arm is bent.

4. At the start, the wand rests horizontally against the chest, with the wrists bent forward. The wand is then thrust forward in a straight line and withdrawn to the chest. During the same movement, (Fig. 36.) either leg is raised with straight knee, and then lowered again.

5. Exercise 2 is modified by raising the legs alternately sidewise as high as possible.

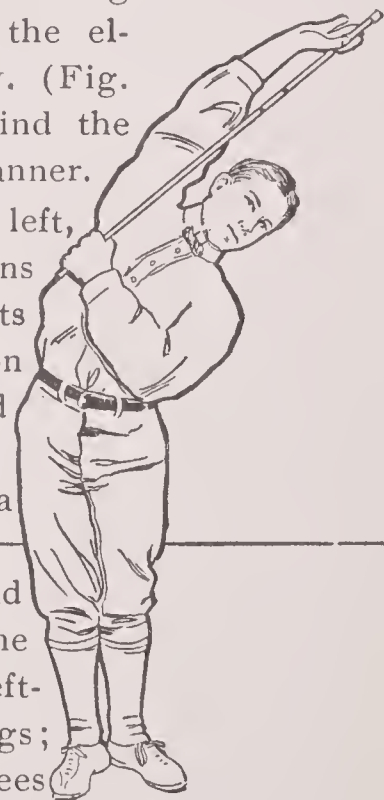
6. The wand is held at arm's length before the body, shoulder high. The movement consists in swinging the wand upward and at the same time raising either leg backward with the knee straight.



7. From the same starting position, the wand is swung above the head and, without in the least bending the elbows, is then swung downward, back of the body. (Fig. 37.) Raising the wand over from its position behind the body to a position in front of it is done in a similar manner.



8. The wand is swung upward to the right, or to the left, close to the body, until vertical; the right (left) arm remains stretched, while the left (right) is bent and finally rests across the chest. Simultaneously, the trunk is inclined on (Fig. 37.) the opposite side and is straightened again when the wand is lowered to the horizontal position. (Fig. 38.)



(Fig. 38.)

9. At the start, the feet are moved apart in a straddling position, while the wand is raised at arm's length horizontally above the head. The wand is then swung downward and at the same time is twisted in such a manner as to cause the left-hand end of the rod to pass between the legs; the trunk is also inclined forward and the knees yield slightly to the force of the swing. (Fig. 39.)



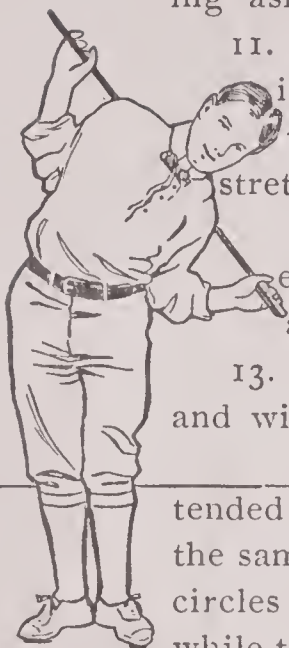
(Fig. 39.)

After resuming the upright position, the right-hand end is swung between the legs in a similar manner.

10. While the wand is held in back of the body across the shoulder blades, the heels together, the trunk is bent from the hips sidewise to the left, then upward, forward and upward, then sidewise to the right, upward, backward and



upward; the back remains straight and the head in line, not drooping nor turning aside. (Fig. 40.)



(Fig. 40.)

11. At the start, the wand rests lightly on the chest. From this position it is raised until the arms are extended and either knee is lifted at the same time as high as possible; the lower leg is perpendicular and the instep stretched so that the toe points downward.

12. The wand is raised from a position on the chest and is then lowered, while the knees are bent to a sitting posture and are straightened again.

13. The previous exercise is modified by thrusting the wand forward from the chest and withdrawing it as the knees are straightened.

14. At the start, the wand is held close to the body, with the arms extended downward, the hands shoulder width apart. The rod is raised slightly and at the same time the forearms are bent. Immediately, the right hand moves upward and circles in such a manner as to bring the right end of the wand over to the left side, while the left hand is carried underneath to the right. As the twist is made, the knees are also bent to a sitting position. (Fig. 41.) After resuming an upright position, the exercise is repeated so as to bring the left arm uppermost.

15. With the feet placed in a straddling position, the trunk is twisted on the hips to either side, while the wand is raised at arm's length above the head; the head should turn with the trunk, but no farther. The twisting sidewise should be far enough to exert a strong pressure upon the internal organs, which will stimulate the circulation in them and aid digestion.

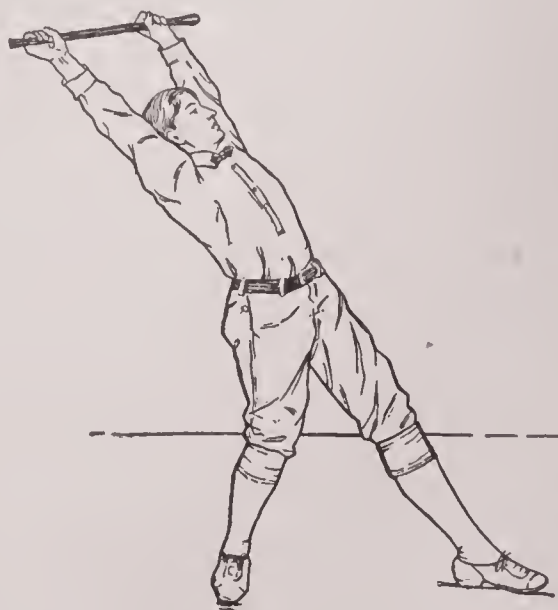
16. From the starting position of the previous exercise, the trunk twists to either side and then inclines forward at the same time that the wand is swung downward as low as possible. (Fig. 42.) After straightening upward, the wand is lowered to the front and the heels closed.

(Fig. 41.)

17. Exercise 17, under The Dumb-bell, is repeated for the wand, except that the wand is swung downward from a position above the head and not reached forward from a rest position.



(Fig. 42.)



(Fig. 43.)

18. The wand is raised at arm's length above the head; either foot charges sidewise, the trunk inclines sidewise over the bent knee, and the end of the wand is struck on the floor.

19. After the body resumes the upright position, either foot is placed backward and is then bent in a charge position; the trunk inclines backward to the opposite side without the wand being lowered, and then straightens again. (Fig. 43.)

20. The wand is held near the body with the arms extended downward. With a swinging motion in raising the knee, either foot steps over the wand between the hands (Fig. 44), if possible without touching it; then either step back again with the same foot or let one foot follow the other, in stepping over forward and also in stepping back to the original position. Bending the trunk or the head forward should, as far as possible, be avoided. If difficulty be found at first in performing the exercise, the lower leg may bend inward as it goes over the wand. The exercise falls among the many movements which have been given for slow digestion (Fig. 44.) and constipation.

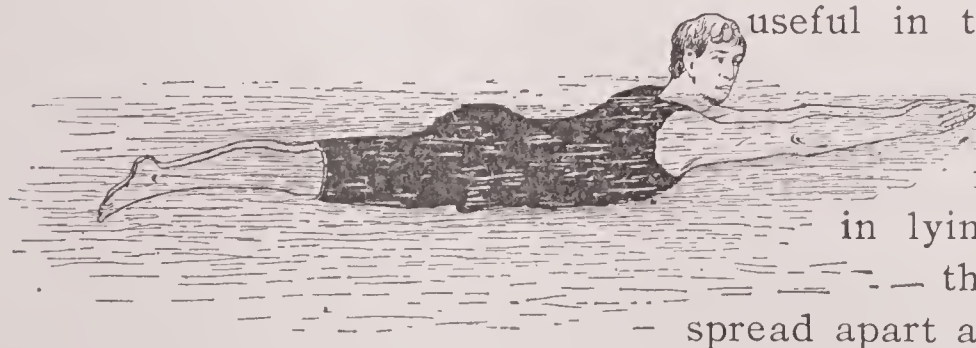
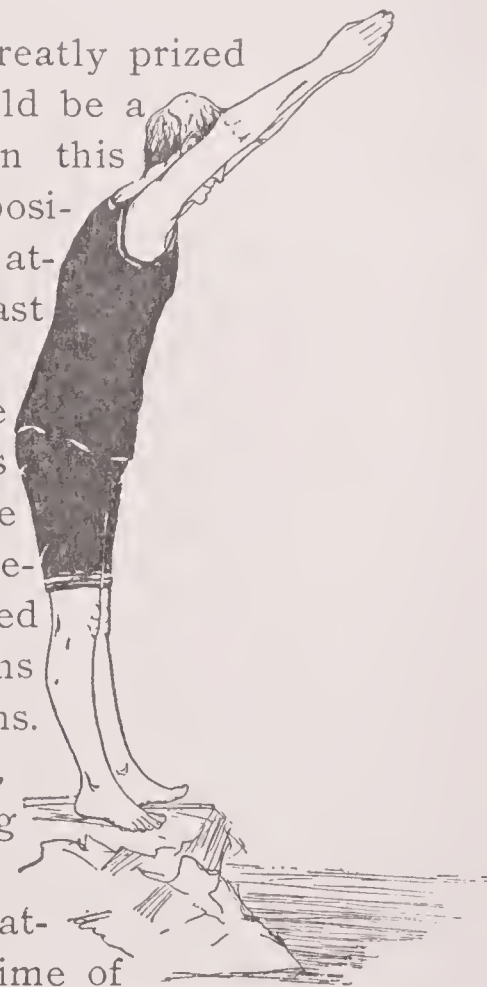
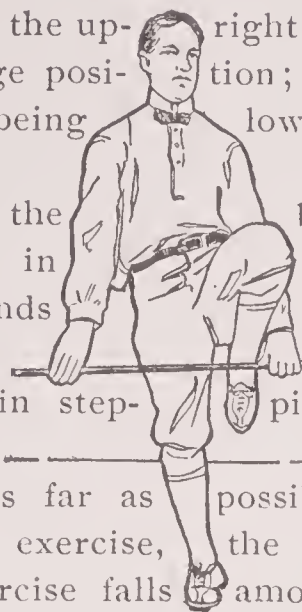
## 6. SWIMMING

SWIMMING is another accomplishment that the Ancients greatly prized and the so-called Moderns have thus far neglected. It should be a matter of regret to parents to see their children untaught in this art, for early in life the plastic body yields most readily to positions and movements that the older person finds difficult to attain. Of its usefulness in saving life, there cannot be the least question.

As a part of physical training, swimming takes a high place as a healthful exercise. It is one of the few single exercises that bring into play all the muscles of the body and at the same time uses them symmetrically. Its free and graceful movements give healthful action to the muscles; if properly followed it tends greatly toward the muscular development of the arms and the chest and promotes the action of the respiratory organs. Contact with water is in itself refreshing and invigorating, while the triumph over one of the elements dilates the being with a sense of power.

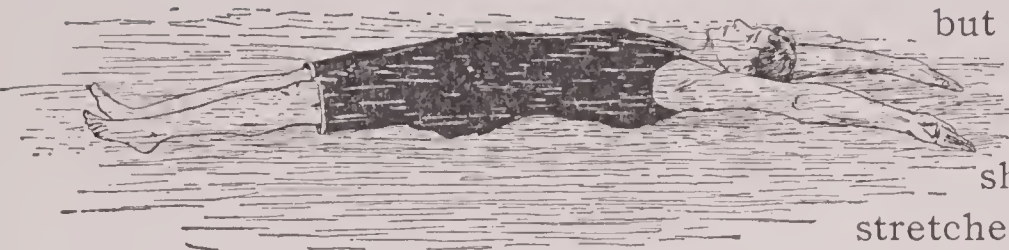
Persons should never enter the water immediately after eating, nor when heated and exhausted by exercise. The best time of day for swimming is either before breakfast, between six and eight, or, later in the forenoon, between eleven and twelve.

An inflated belt, fastened about the upper body, has been found most useful in teaching the pupil how to swim. The first lesson, which should be taken in shallow water, consists in lying on the surface, flat on the stomach, with the limbs spread apart and motionless. Float about easily in this manner until confidence in the belt is assured. As there is little but fulcrum in water, the first sensation while in this position is



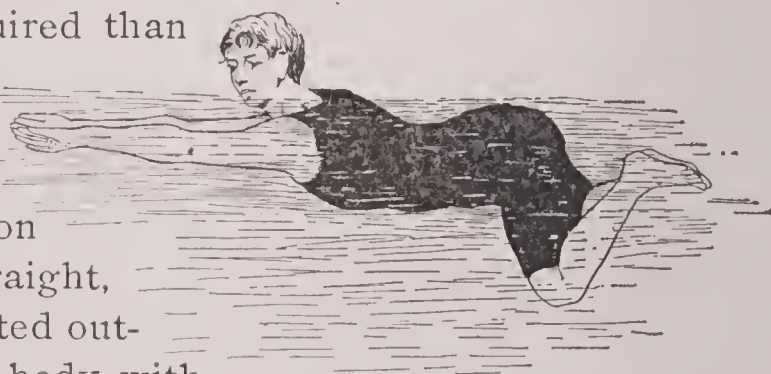


alarming. Kicking with the legs only aggravates this feeling and affords but a fancied advantage. After becoming accustomed to the position with the face downward, the pupil should lie on the back with the limbs stretched outward from the body.



As an introduction to a second day in the water, the lungs are well filled and the head held under the surface while ten is counted. On raising the head out of the water wink the eyes vigorously without touching them with the hands. This will help to overcome a feeling of dread or distaste for the water. The rest of the period may be devoted to practicing the arm stroke. This should be tried first before going into the water. An erect position is taken; the elbows pressed close to the body; and the hands are brought beneath the chin with the palms together. The fingers then take the lead while extending the arms forward straight from the chest. When the arms are stretched the palms are turned outward and the arms are swept sidewise, shoulder high, to a line with the body. The movement is followed by bending the elbows and drawing the arms inward to the first position beneath the chin. The elbows should never be raised above the hands in the stroke. When attempting the movement in water with the aid of the inflated belt, advance into the water up to the armpits and, turning toward the shore, straighten the body out near the surface; force the legs as far from the bottom as possible; keep the head upright and the chest well filled. Then do not strike out wildly with the hands, but carry them forward until the arms are fully extended beneath the surface of the water before turning the palms outward. The forward extension of the arms, since it does not aid in advancing the body, is a negative movement, and consequently should be made slowly and quietly; speed and force should be exerted only in striking outward.

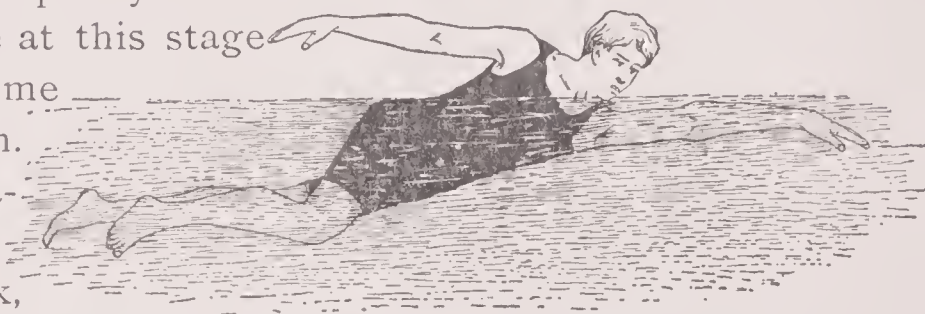
The leg stroke is less easily acquired than the arm movement. While grasping with both hands some solid object, as a tree, a rock, or the edge of some structure, lie stretched out on the surface of the water, the legs straight, the heels together, and the toes pointed outward. Draw the feet in toward the body with the heels remaining together; then thrust the legs apart smoothly; and, when fully extended, close them together like the blades of a pair of scissors. Afterward, practice the stroke with the hands free and stretched motionless on the surface of the water.



When both strokes have been brought within control, the next difficulty lies in combining the two in harmonious action. Proceed to lie on the surface of the water, supported by the belt, with the arms stretched forward and the backs of the hands together, while the legs are spread apart. For the first movement, the arms must sweep outward to a right angle with the body and the legs be brought together. From this point, the hands are

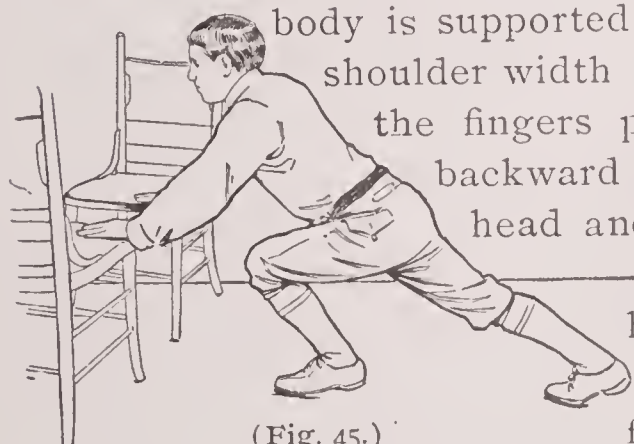
brought under the chin by dropping the elbows, and at the same time the feet are drawn in toward the body. The limbs are now in a position to propel the body forward. This third movement consists in extending the arms with the palms together and also thrusting the legs apart. The three movements should be distinctly separate for the first trials and performed slowly and resolutely. After some practice it will be easy to combine them in well-rounded, harmonious strokes.

The student can feel that much of his task has been accomplished when he has mastered the strokes with the aid of the belt. He should then try the movements in the same shallow water without such support. A leaning position is taken while the feet rest on the bottom and, with the lungs inflated and the breath held, a few strokes are made with the arms. Several attempts will show how buoyant the body is in water and, by that time, the pupil should be able to keep afloat and increase the number of strokes with the arms and the legs together. Perhaps the greatest progress can be made by striking off from a rock or step lying a foot beneath the surface in about four feet of water. For the starting position, the body should incline forward and rest partly under the surface while the knees are bent. Many have been able at this stage to strike out with the limbs, the first time a lunge forward from the steps is taken. The entire process may seem slow and laborious, but it is a needful preparation for correct, advanced swimming such as back, side and racing strokes, floating, diving, etc. A final word of warning should be given, not to venture at any time beyond the bounds of safety, nor attempt foolhardy feats which more accomplished swimmers would not try.



## 7. EXERCISES WITH CHAIRS

IN THE front leaning position, which is taken for the first exercise, the body is supported between two chairs, placed front to front, shoulder width apart, by resting the hands on the seats, the fingers pointed forward; the legs are extended far backward and in the same straight line with the head and the trunk; the back arched; the arms at full length; the head erect.



(Fig. 45.)

chairs and is then extended again. (Fig. 45.)

2. Both legs jump forward with the heels together and then backward in one movement until extended.

3. Either leg is raised from the floor, as high as possible, and is then lowered, with the knees and the elbows straight.

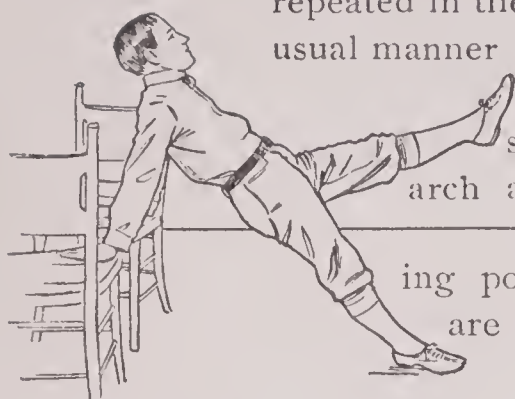
4. On lifting either leg from the floor, the knee is bent forward between the chairs and is then extended again. (Fig. 46.)



(Fig. 46.)



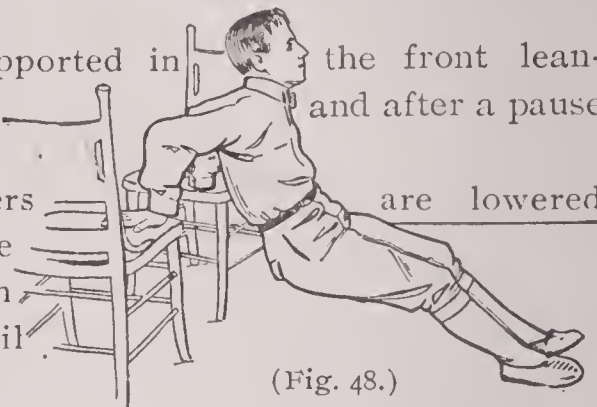
5. The exercises of raising either leg and of bending either knee upward are repeated in the back leaning position. The trunk is supported at arm's length in the usual manner at the edge of the chairs, but the body is extended forward instead of backward, which will bring the chest upward. (Fig. 47.) The feet should be far enough in advance of the chairs to cause the back to arch and not sink down.



(Fig. 47.)

6. While the body is supported in the front leaning position, the arms are bent slightly, and after a pause are straightened again.

7. By deeper bending, the shoulders are lowered to a rest position on the edge of the chairs — which should accordingly be less than shoulder width apart — and are then raised until the arms are fully extended.

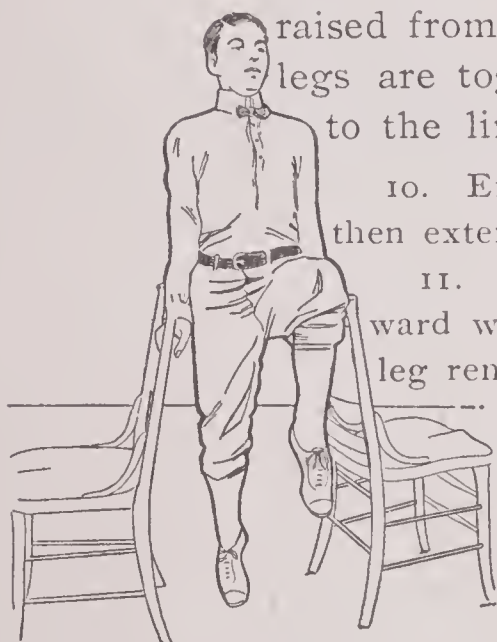


(Fig. 48.)

8. In the position with the chairs shoulder width apart, the body dips as low as the arms allow, which are then straightened again.

9. While supported in the backward leaning position, the arms and the hips are bent until the body assumes a half sitting posture between the chairs, and are then extended as at first. (Fig. 48.)

For the following exercises, the chairs are back to back. The body is raised from the floor with the hands grasping the tops of the chairs; the legs are together; and the toes pointed downward so as to give rigidity to the limbs and prevent them from swinging during the movements.



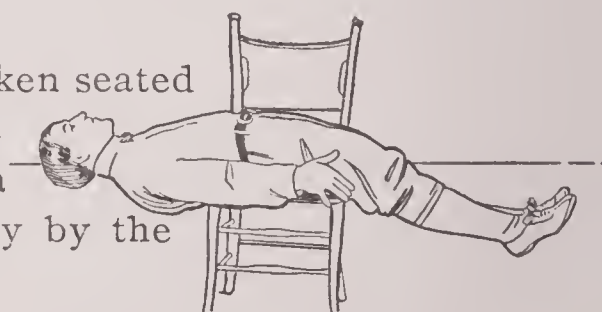
(Fig. 49.)

10. Either knee is bent upward until the thigh is at least horizontal and is then extended. The exercise is then repeated with both legs. (Fig. 49.)

11. By bending the knee, the left, or the right, lower leg is raised backward with a swinging movement and is then lowered; the thigh of the bent leg remains vertical and close to the extended limb.

12. By bending both legs at the knees, the lower legs are raised together and are then extended in the same manner as in the previous exercise.

The following exercises are taken seated on a chair sideways so that the back is not in the way of a backward movement. The arms rest loosely by the sides.



(Fig. 50.)

13. The trunk is lowered backward slowly to a horizontal position and is then raised in the same length of time until upright. (Fig. 50.)

14. The previous exercise is repeated with the hands clasped on the back of the head.

## 8. THE HORIZONTAL BAR

### POSITION: HEIGHT OF SHOULDERS

[The remainder of the exercises in physical training have been arranged for such apparatus as is found in the numerous municipal playgrounds of Europe, which are being introduced to some extent in American cities. Many manufacturers advertise such outfits for private lawns and grounds at low cost, and several families might very profitably unite in providing their children with this means of recreation. The horizontal bar may be bought separately, as there are several varieties with rubber ends now offered that are adjustable to doorways and passages, while the rest of the apparatus may be put up by a skillful carpenter, with the directions for space and angle here given.]

1. THE hands grasp the bar, shoulder width apart, the fingers uppermost and pointed to the front; the feet are placed on the ground as far as possible in advance of the bar, so that the body hangs beneath it; the heels together, the toes pointed outward, the legs and the trunk straight, the arms extended, the head in line with the body, the eyes directed upward. While suspended in this backward leaning position, the body is raised and lowered as in the simplest lever by bending and extending the arms.

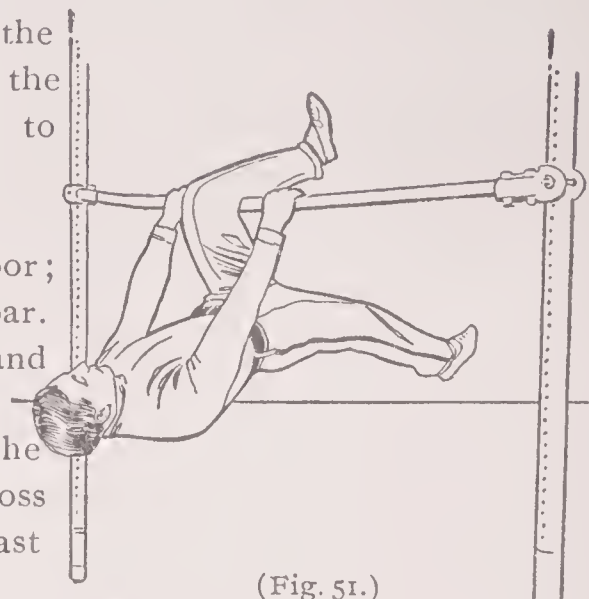
2. The previous exercise is repeated in the forward leaning position. The feet are placed as far as possible to the rear of the bar; the line of the body is maintained; the arms are extended.

3. While sustained in the forward leaning position, the knees are bent to a sitting posture and, instantaneously, the feet are raised from the ground and swung forward with sufficient impetus to carry the body to a backward leaning position and then back again to the position at the start.

4. The hands grasp the under side of the bar a few inches apart; the arms are bent so as to raise the feet from the floor; the elbows are close to the side; the chin rests above the bar. The body is then swung forward and backward, with the legs and trunk in line and the toes pointed downward.

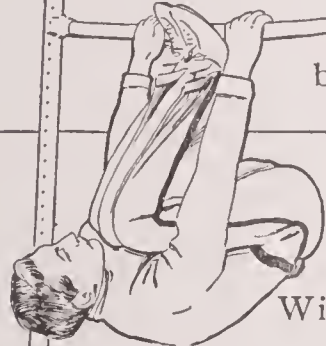
5. With the fingers grasping the bar by the upper hold, the elbows are passed over the bar so that the upperarms rest across it. The body is then swung forward and backward as in the last exercise.

6. While the hands grasp the bar, the knees are bent to a sitting position underneath as far as the arms allow. The right leg is raised until the sole of the foot presses the bar and is then slipped over until resting on it under the knee; at the same time the left leg is extended horizontally and in line with the body (Fig. 51). While hanging in this position, the body is swung backward and forward.



(Fig. 51.)

7. The left leg is passed over the bar after the right, and the body, which hangs by both knees and the arms, is swung forward and backward. At the end of the movement, release the hold of the knees and turn over backward slowly until the feet touch the floor.



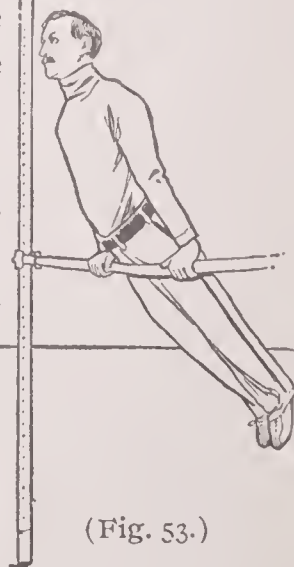
(Fig. 52.)

8. First pass the left leg over the bar outside the hands. Without pause, bend the arms, press firmly upon the hands and swing up to a sitting position on the bar. Now change the grip to an underhold; swing the right leg over the bar, at the same time jump off, landing upon the balls of the feet with the knees yielding.

9. While the hands grasp the bar, the knees are bent to a sitting position; both legs are then raised and passed under the bar. (Fig. 52.) Without pause, turn over backward and extend the legs and the trunk in a forward leaning position, the back hollowed, the chest thrown outward. The knees are then bent and the legs brought between the hands and lowered to the first position.

For the following exercises, the position of the bar is waist high. The hands grasp by the upper hold, except in exercise 15.

10. By means of an upward spring, rise to a rest position with the arms straight and the upper part of the body above the bar. (Fig. 53.) After a pause, jump off and alight on the balls of the feet, the knees yielding to the force of the descent.



(Fig. 53.)



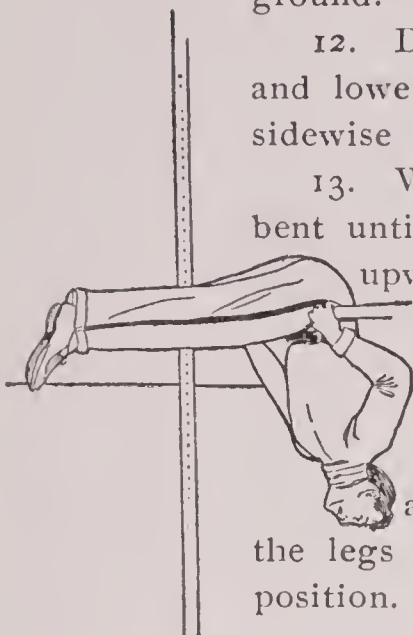
11. During a vigorous upward jump, either knee is bent and raised between the body and the bar, and is then extended again so that both feet land together. In repeating the exercise, both knees are bent and then extended while off the ground.

12. During an upward jump, either leg is raised sidewise as high as possible, and lowered again before the descent. In the same manner, both legs are parted sidewise in a straddling position while in the air.

13. While the body is sustained against the bar in a rest position, the arms are bent until the fore and the upper arms form a right angle, and are then stretched upward.

14. From a rest position at one end of the bar, travel sidewise to the opposite end by shifting the hands along alternately; the arms remain straight.

15. At the start the feet are placed somewhat in advance of the bar and the hands grasp by the under hold. On bending the arms, shoot the legs and the body forward and over the bar, completing a circle to the first position. (Fig. 54.)



(Fig. 54.) The position of the bar is above the reach, for the exercises below:—

16. While the body is suspended at full length, the exercises of bending either knee or both knees upward are repeated.

17. By bending the knees one at a time or both together, the lower legs are raised backward and are then lowered again, while the thighs remain vertical throughout the exercises.

18. Either leg is raised forward horizontally without swaying the body and is then lowered again beside the other. The movement is made also with both legs.

19. During a vigorous upright spring, release the grip of both hands and change to the under hold. On a second jump upward, reverse the grasp from an under hold to an upper hold.

20. By a strong pull with the hands, the body is raised until the elbows may pass over the bar so that the upper arms rest across it. After a pause, the body is lowered until again extended.

21. By bending the arms, the body is drawn up until the chin rises above the bar, and then descends to the full hanging position.

22. The previous exercise is varied by bending both knees upward and extending them while the body is being raised and lowered.

23. From a hanging position at one end of the bar, travel sidewise to the opposite end by shifting the hands along alternately.

24. The hands grasp one end of the bar on opposite sides, so that the body is turned toward the other end and a line passing through the shoulders would be at right angles to the bar. Travel forward to the other end of the bar and back again by advancing hand over hand.

25. During an upward spring, the arms are stretched apart sidewise by slipping the hands along on the bar as far as possible, and are brought together again before the descent.

## 9. THE PAIR OF RINGS

THE flying rings are usually 5 to 7 inches in inside diameter and are suspended about 18 inches apart. Webbing straps are stronger and safer than leather for suspending the rings and are better than rope for the

purpose in many ways. The straps should be double, so that the rings may hang in the loop. The following exercises should be performed with the rings raised at first shoulder high and afterward at a greater height:

1. In the position of exercises 1 and 2, under The Horizontal Bar, the movements of raising and lowering the body by bending the arms are repeated.

2. While grasping the rings, one in each hand, incline the body backward and then revolve first to the right, then front, then to the left and back, the feet remaining firmly placed on the floor, the head, the trunk and the limbs in line. The body thus describes the surface of a cone, the apex of which is found in the feet.

3. The body is raised from the floor so that the chin is above the rings. While the weight is sustained by the right hand, the left arm is extended holding the ring at arm's length. After a pause, the ring is withdrawn by bending the arm, and the left ring is then extended from the body.

4. The feet are raised forward from the ground and passed between the rings, and then slowly descend to the rear so as to complete a circle. If difficulty be found at first in starting the circle, the knees may be bent and brought close to the body, as soon as the feet are lifted from the ground.

5. The feet are swung upward as in the previous exercise, and when they reach the rings, the toes are put into them; the knees are then bent and the body continues the action of the circle; the arms are extended; the back is lowered and hollowed; and the grasp is bent in such manner that the body is turned face downward. (Fig. 55.) After a pause in this hanging position, the trunk is raised and the feet are again lowered to the ground.

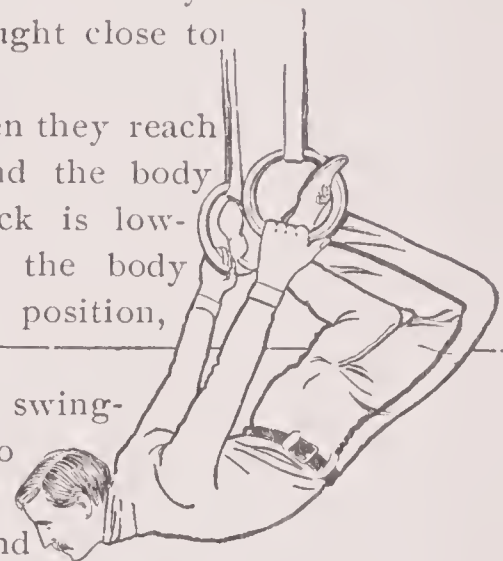
6. While grasping the rings with the arms bent, start the body swinging by running forward and backward; the feet should continue to touch the ground at the points within their reach.

7. The previous exercise is modified by turning about at the end of each swing so as always to face in the direction in which the body moves. (Fig. 55.)

8. At the end of a forward swing, the feet are raised from the ground; the toes are inserted in the rings; and the back is arched as in exercise 5. In this position, the body may swing forward and backward as long as desired.

9. At the end of a backward swing, the legs are raised and swung between the rings in a backward circle to a standing position, when the grasp is released.

10. The arms are thrust through the rings and the elbows are bent so that the hands may clasp in front. While resting upon the upperarms, forward and backward swings are taken in the manner described above.



## 10. THE DOUBLE INCLINED POLES

THE many forms of climbing not only strengthen every part of the body, but fortify the courage and have a practical value in increasing the means of escape from danger. By a correct employment of the various parts of the body in assisting each other, climbing may be performed with ease and elegance. While none of the many exercises that follow are dangerous, the beginner should stop at once when such signs of fatigue appear as an insecure grasp, a struggle of the lower limbs, or a halting of part of the body in any movement. This will give him an opportunity to descend in safety to the ground while his strength lasts.

The regulation size of climbing poles and ropes is one and one-half inches in diameter, and fifteen feet is a desirable height for practice



purposes. The double, or pair of, poles are placed eighteen inches apart, which is also the width of the inclined ladders. The rounds of the ladders are twelve inches apart. All inclined apparatus is at an angle of 45 degrees.

The general position for the following exercises is behind or under the poles, while the body, except in number 6, faces the front. All exercises in which the right hand follows the left are repeated so as to advance the right hand first.

1. The left hand grasps the left pole as high as the reach, and the right hand grasps the right pole at the same height. The feet are made to clasp the left pole by raising the left leg before the pole, placing the outside edge of the foot against the right inner side of the pole, the knee to the left; then lifting the right foot in back and placing the outer edge against the outside of the pole; the ankles are therefore crossed and the pole passes between the edges of the feet. The legs are then straightened and the body is raised, causing the arms to bend at the height of the chest. Both hands advance as high as the reach; the legs are drawn upward, while the arms remain straight; the trunk is raised as before, bending the arms to a rest position. The descent is made in the reverse manner.

2. The ascent is made with the hands clasping both poles. At the start, the feet are passed from the outside over the poles, the lower legs resting against the front surface. The descent may be made by sliding downward without grasping the pole with the hands.

3. The ascent is made on one pole, the return on the other. At the start, the hands grasp the pole with the left hand above, but touching the right. The left hand advances to the reach, the right following; the legs are then drawn upward without bending the arms; the body is extended until the arms are in a position to advance farther. In descending, the right hand slips down opposite the chest, the left following; the body is then lowered to straighten the arms.

4. The body travels upward without the use of the legs; the hands clasp both poles. At the start, the hands draw the body upward as high as possible; the left hand then advances to the reach, the right following; the arms are next bent, raising the body to a rest position of the hands.

5. From a similar starting position, the ascent is made by advancing both hands at the same time. The advance is only slight and never exceeds a few inches.

6. Exercises 4 and 5 are repeated with the back turned toward the poles. The hands grasp the poles above the head, the fingers in the rear, the thumbs in front; the legs clasp the pole from the outside. The left hand slips upward (or both hands for exercise 5) and grasps the pole aided by the elevation of the left side of the body; the right hand follows in the same manner.

The following exercises are taken in front of the poles but facing toward them.

7. The body is inclined forward until the hands grasp the poles at half reach; the insteps are placed against the inside of the poles, the knees on the outside, so that the lower part of the legs rest crosswise. The climb is made by advancing the hands together as described above.

8. The hands grasp the pole at the height of the hips, the feet together and from twelve to eighteen inches away from the bars, the body and the head erect, and the arms extended. The body is thrown forward between the bars by allowing the arms to bend, and is then returned to the upright position; the knees remain

straight, the stomach drawn in, the chest arched outward. The movement is excellent for expanding the chest.

9. The dipping movement of the last exercise alternates with forward bending from the hips, the arms and the knees remaining straight. The movement consists in swinging the hips backward and downward.

10. The dipping exercise alternates with deep knee bending.

11. From a stand position between the poles, the body revolves over backward, aided by the hands, which grasp the bars tightly at shoulder height and pull the body over. When the feet reach the bars, the insteps are placed against them; the trunk then continues the action of the circle, and at the same time the grasp of the hands is bent in such a manner that the body hangs downward between the bars by the toes and the fingers. After a pause, the legs are swung downward to a stand position.

12. The hands grasp the poles at the reach and lift the body from the floor. Elevated in this position, the body is swung backward and forward with the legs and the upper body in line, the knees straight and the toes pointing downward.

## II. THE INCLINED LADDER

THE following exercises are taken on the upper side of the ladder:—

1. While the feet rest on the ground, the hands grasp the round at the reach; the feet are raised to the lowest round, the toes pointed forward; the body is inclined in line with the ladder; the head is erect. The right hand and the right foot are lifted at the same time to the next higher round; the knee is straightened; and the left side of the body then advances in the same manner. Either walk or run up and down the ladder in this way.

2. With the back turned toward the ladder, the hands grasp the beams or side rails below the height of the shoulders; the feet are raised to the first round; and the body then extended in line with the ladder. Otherwise the ascent and return are made in the manner described above.

3. The ascent is made as in exercise 1. On reaching the top, the legs are swung over the sides of the ladder, the knees bent, the fore legs hanging loosely; the hands grasp the side rails on the under edge. The descent is then made by sliding downward at a speed which is regulated by the pressure of the hands.

4. The hands rest on the hips; the right foot is placed on the first round, the left following; the feet are advanced on the round so that the rest is nearly at the heel; the body is inclined forward; the head is in the same straight line. The left foot is raised to the next round; the leg is then straightened and at the same time the right foot follows.

5. The hands grasp as high as the reach, while the inside of the feet rest lightly on the side rails, the legs are straight, the toes pointed downward. By the strength of the arm, the body is drawn upward to the top, the left hand leading, and is then slipped back again with the feet in the same position.

6. After advancing half-way up the ladder, climb between the rounds to the under side. The hands then grasp the round above the head at arm's reach; the toes are inserted behind a lower round; the trunk is thrown forward so as to arch the back outward. After a pause in this hanging position; any means may be used to return to the ground.

7. The feet are thrust through the ladder and a seat is taken on a round with the body facing the apparatus; the toes are inserted behind a lower round; the arms are extended above the head, the hands clasped. Thus secured, the trunk is bent backward



from the hips and is then raised again to the upright position. The feet are placed on the lower round, the back facing the ladder, the hands grasp a round above the head at arm's reach. While sustained by the hands alone, either leg is raised and lowered with straight knees, and afterward both legs, without change in position.

The position of the body is changed for the following exercises to the under side of the ladder.

8. Exercise 1 of this series is repeated in detail.

9. The hands grasp the sides of the ladder at full reach. The arms are then bent, thus raising the feet from the ground; the legs remain straight and together, the toes pointed downward; the head is held back. The right hand reaches upward at full length, the arm is then bent and on the instant, without change in the relative position of the legs and the trunk, the left arm is raised to the reach beyond the right. In descending, the leading hand is slipped down to the round below the one grasped by the supporting hand.

10. While the body is suspended with the hands grasping the side rails, both arms shoot upward at the same time as far as possible; the advance can seldom exceed a few inches at a time.

11. Exercises 10 and 11 are repeated, with the arms bent at right angles when shifting.

12. With the back turned toward the ladder, the hands grasp the round within reach; the body is then raised from the floor, causing the arms to bend at right angles. In traveling upward, a jump is made with both hands to the round above, while in the descent the hands are slipped downward to a lower round.

## 12. THE VERTICAL POLE OR ROPE (FIG. 56)

1. THE hands grasp the pole or the rope at full reach; the right foot is placed against the left side of the pole, the lower leg in the rear; the left foot is passed in front and placed on the right side; the legs are then straightened, raising the trunk and at the same time bending the arms. The right hand advances as high as the reach; the legs are drawn upward without bending the arms; the feet then firmly clutch the pole and the trunk is straightened upward so that the left arm is bent; this hand is next raised to the reach and beyond the right and the legs are drawn upward as before. In descending, the leading hand is slipped down to the breast and the movements of the body are reversed.

2. In repeating the exercise to allow the left hand to lead upward, the descent may be made by the legs alone while the arms are extended horizontally at the side; the rope cannot be used in this manner.

3. Ascend hand over hand without the use of the lower limbs, the legs remaining straight and in line with the pole, the toes pointed downward. In descending, the feet clutch the pole while the body may slide or be lowered to the bottom.

4. The upward climb is made as before, but in descending, the body is lowered hand over hand while the legs are free from the pole, straight, and together.

5. The body is raised from the ground and the legs are extended forward horizontally, with the pole passing between them; the feet are together and the toes pointed forward; the trunk upright; the head thrown slightly backward. The hands follow each other in climbing upward, after which the descent is made with the feet clasping the pole.



(Fig. 56.)

# PASTIMES, SPORTS, GAMES AND AMUSEMENTS





# SPORTS AND GAMES—INDOOR

## BOWLING

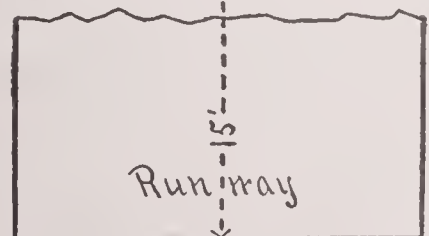
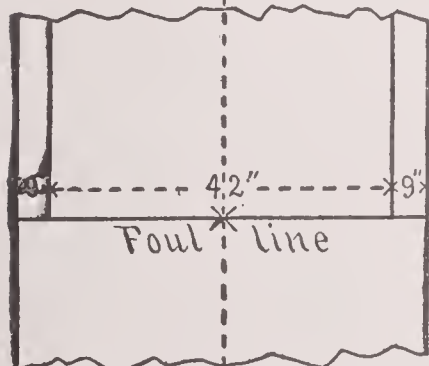
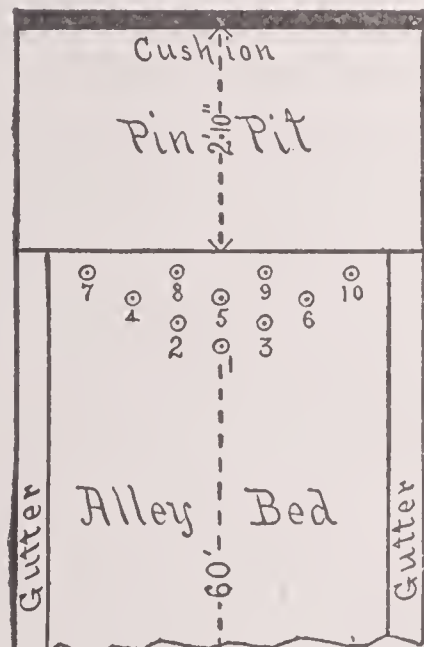
**B**OWLING, which is one of the oldest athletic sports known to the civilized world, was introduced into America about two hundred years ago. Since that time, the game has undergone many changes, and has passed through several periods both of popularity and of unpopularity, but as it is now played, it is one of the most familiar and enjoyable of our indoor winter sports. It combines in one the benefits of several of the other forms of athletics, and, besides being especially valuable as a means of training the hand and the eye to work together, it is one of the

best exercises for the arms, back, and legs.

There are very few towns or cities, especially east of the Mississippi River, which are not provided with one or more Bowling Alleys, though many of these alleys and their fittings are not of regulation size and make. The material of which a regulation alley is usually made is selected maple, or pine and maple, in long strips, three inches wide and one inch thick. These are placed on edge, side by side, and are bolted or nailed together and secured directly to the foundation material. The floor or *bed* of the alley proper must not be less than sixty-three feet three inches in length, though whenever possible its length should be at least seventy-two feet. The width should be forty-two inches.

At the pin end of the alley, ten circles, two and one-fourth inches in diameter, are plainly marked, either with paint or in some other way. These circles are arranged in the form of a triangle with its base parallel to the end of the alley, and

they are twelve inches apart from center to center. The center of the circle at the vertex of the triangle, on which pin No. 1, called the *head pin*,





is placed, is three feet three inches from the end of the alley. Each of the pins is placed over one of these circles, and the numbers and positions of the pins used vary in the different games, as will be explained hereafter. At a point sixty feet from the center of pin No. 1 a line, called the *foul line*, is drawn across the alley, at right angles to its sides. On each side of the alley, from the foul line to the pin end, is a rectangular gutter about nine inches wide and two or more inches deep. This is to receive the ball in case it leaves the alley. At the pin end of the alley is a *pit* five feet in width, at least two and one-half feet in length, and at least ten inches in depth, the bottom of which is covered with a thick mat of canvas, leather, or other strong material.

At the side of this pit farthest from the alley is a large, dark-colored mat or cushion that extends the entire width of the pit and is usually five or more feet in height. Back of the foul line is a space, called the *run*, the width of which must not be less than that of the alley, and the length not less than fifteen feet. This is the space over which the bowler runs before casting the ball, and it may be either a continuation of the alley itself, or part of the floor of the building, but it must be level and on the same plane as the alley.

Extending along the alley, near the gutter, from the pit to a point a short distance beyond the foul line, is the *runway*, which is a gutter, usually elevated above the plane of the alley, in which the balls are returned from the pit to the bowlers.



(Fig. II)

Regulation *League* pins, (Fig. II) are fully described in Rule IV of the American Bowling Congress, appended to this article.

The balls (Fig. III) are made of hard wood, such as *lignum-vitæ*, are perfectly round, and vary in weight from one to fifteen pounds, and in size from that of an ordinary baseball to twenty-seven inches in circumference. The largest balls usually have two holes bored in them, which are about one inch in diameter and three or more inches in depth, and are about one and one-half inches apart. These are for convenience in handling, the thumb being



(Fig. III)

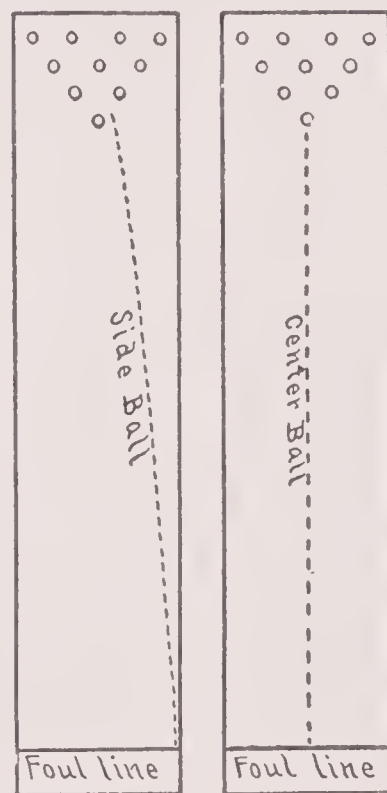
inserted into one of the holes, and the middle finger into the other.

There are many different opinions as to the best way in which to bowl, but, except for a few general rules, the bowler should adopt

that position and style which is most natural for him or her. In nearly all Bowling games the object is to knock down as many pins as possible with each ball, and there are several different ways of doing this. You should begin, of course, with the smaller balls, and after acquiring control of them you can progress gradually to the larger ones. With most beginners, there is a tendency not to follow this rule, because it is natural to suppose that a large ball will knock down more pins than a smaller one; but the first requisite is to learn to deliver the ball correctly and in the desired direction, and this faculty can be acquired most easily and quickly with a comparatively small ball.

The Bowling game that is most common, and that should be the first to be learned by the beginner, is the *Tenpin game*, in which, as the name indicates, a pin is placed on each of the ten spots on the alley. The balls that are now used in this game are all *finger balls*, that is, balls provided with the holes that have been described for the insertion of the thumb and finger.

Take one of these balls from the runway with the hand with which it is to be bowled, by inserting the thumb and second finger in the finger holes, and walk to your position on the run behind the foul line. You must now decide whether you desire to start the ball in the center of the alley or at one side of it (Fig. IV, 1 and 2), and take your position accordingly. This is entirely a matter of judgment; it can best be decided by trying each way, and selecting the one by which you accomplish the best results.



(Fig. IV, 1 and 2)

Stand five steps back of the foul line, with the body bent slightly forward and the left foot to the front, and with the ball held either against the chest, or at about the height of the knee, its weight resting on the left hand. Draw an imaginary line with the eye from your position to the head pin, and when you deliver the ball try to cause it to follow this line. You should endeavor to strike the head pin on one side, rather than in the center, as more pins will be knocked down in the former case than in the latter.

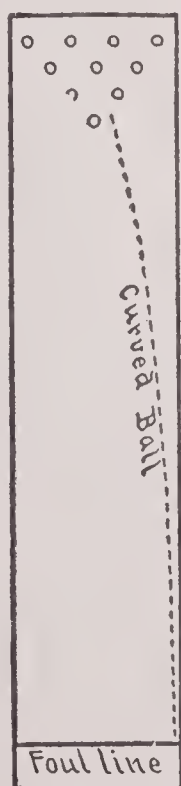
Having thus decided what direction you desire the ball to take, swing it so as to make sure that your finger and thumb have a firm grip in the finger holes. Now, starting with the right foot, take four quick steps, and, with the left foot in front, deliver the ball. The delivery is made by a full sweep of the arm close to the side; do not bend the arm or back, but bring the ball close to the alley by bend-



ing the knees and keeping the feet wide apart. The foregoing directions can be made to apply to a left-handed bowler by interchanging the words right and left where applied to the hands or feet.

After bowling the first ball, do not bowl the second until all the pins that are down have been removed from the alley and the gutters. These pins are called *deadwood*, and players are prohibited by the rules from counting pins made by a ball bowled when there is *deadwood* on the alley or in the gutters. You must be careful not to step on or over the foul line, and must cause the ball to take the alley very near the point at which you release it from your hands, and thus avoid bounding, or "lofting" it. Failure to observe either of these rules will prevent your receiving credit for the pins knocked down by that roll.

Do not try to bowl too swiftly at first; your first efforts should be directed toward acquiring a graceful and easy delivery and accurate control of the ball. Increased speed will gradually be acquired; but when once you have become proficient in the swing and the delivery, you will find that slow balls, properly placed, will make a good score.



Many of the best bowlers prefer to bowl a *curved ball*, that is, one that is started at one side of the alley and is made to curve gradually in the desired direction, so as to strike the pins at a greater angle than would be possible with a *straight ball* (Fig. IV, 3). This curve is produced by giving the wrist a quick turn in the direction in which it is desired to have the ball curve, at the same time that you release it from the hand.

Whenever possible, rubber-soled shoes should be worn for Bowling; if you wear shoes that have leather soles, the bottoms should be chalked frequently to prevent slipping. A chalk box, and a wet sponge for moistening the fingers, will be found usually near the alley.

The majority of people when beginning to bowl have as great difficulty in learning to score as they do in mastering the game itself. You will find, however, that scoring is a very simple matter, when once you have obtained a clear understanding of its principles. The game of Tenpins is divided into ten equal parts, called *frames*, which correspond to the innings in base ball. The players bowl their frames alternately, each being allowed two successive balls to a frame. (See Rule IX, following.) The scoring is complicated by the fact that there are three results that may be accomplished by bowling one or both of the balls allowed for each frame, and that each of these results requires an entirely different method of scoring.

First, a player may knock down all of the ten pins with the first ball, in which case he is said to make a *strike*; second, he may make a *spare* by getting with the second ball all of the pins that remain after he has bowled the first; and, third, he may make a *break* by getting nine pins, or less, with the two balls. The card or blackboard on which the score is kept is divided, by non-erasable straight lines, into a number of spaces, as indicated in Figure V.

The large spaces at the left are for the names of the players; the squares in the ten numbered columns are for the scores of each of the ten frames; the squares in the last four columns are for recording the number of strikes, spares, and breaks, and the total scores of the different players. The squares in the bottom row are used for the total scores of all the players in team games. On most boards the last four columns are omitted. When a

SCORE BOOK OR BOARD

PLAYERS	FRAMES										Strikes	Spares	Breaks	Game
	1	2	3	4	5	6	7	8	9	10				
TOTALS														

(Fig. V)

player makes a break in any frame, he scores in the appropriate square the number of pins knocked down by the two balls. When he makes a spare, he indicates it by putting in the right-hand upper corner of the frame a diagonal line, thus (↖). He cannot score the number for that frame, however, until he has bowled the first ball in the next frame, which he must do in his regular order. The score for the frame in which the spare was made is then the number of pins knocked down by the first ball in that frame (ten) plus the number made by the first ball of the next frame.

When a player makes a strike, he indicates it by putting a cross (X) in the right-hand upper corner of the frame. He must then wait, as in the case of the spare, until he has bowled his next frame, when he can find his score for the strike frame by adding to the number of pins made in it (ten) the number made by the next two balls. You will thus see that if he makes strikes in two adjoining frames, the score for the first frame will be (ten) plus (ten) plus the number of pins made with the first ball of the next, or third, frame. Should a player make a strike, or a spare in the tenth frame, he must complete the play by rolling extra balls before leaving the alley. If he has made a strike he will roll two extra balls; if a spare, only one. The score for the tenth frame can thus be determined in the same way as in the other frames. The final score of each player for the game is found by adding together the various scores made by him in the ten frames.



Following are some of the terms commonly used in bowling:—

*Break*—When in any frame a player fails to knock down the ten pins with the two balls allowed.

*Bridge* or *Railroad*—When the two end pins in the back row are left standing after the first ball in any frame has been bowled.

*Chalk Box*—A box placed near the alley and containing chalk for the shoes of the bowlers.

*Deadwood*—Pins that have been bowled down and remain either on the alley or in the gutters.

*Double header*—Two consecutive strikes.

*Foul Line* or *Foot Mark*—A straight line drawn across the alley, at right angles to its sides, at a point sixty feet from the center of the head pin.

*Frame*—One of the ten equal parts into which the game is divided, corresponding to the innings of a base ball game.

*Gutter*—The two troughs, one on each side of the alley, into which the balls roll if they leave the alley at the sides.

*Lofted Ball*—One that bounds on the alley.

*Pin Pit*—Space at the end of the alley, into which the pins fall when bowled off the alley and which also receives the balls as they drop from the end of the alley or from the cushion at the rear.

*Pin Boy*—Boy who sets up the pins and returns the balls to the players.

*Poodle*—A name applied to a play in which the ball rolls into the gutter without striking a pin.

*Railroad*. See *Bridge*.

*Runway*—A raised trough near the alley, in which the balls are returned from the pit to the foul line.

*Run*—Space back of the foul line over which the player runs before delivering the ball.

*Spare*—A play in which the pins are bowled down with two balls.

*Strike*—A play in which all of the pins are bowled down by the first ball in the frame.

*Triangle*—The outline at the end of the alley on which the pins are arranged.

*Turkey*—Three successive strikes.

## REVISED PLAYING RULES OF THE AMERICAN BOWLING CONGRESS

---

### RULE I—THE NAME

These rules shall be known as the rules of the American Game of Tenpins.

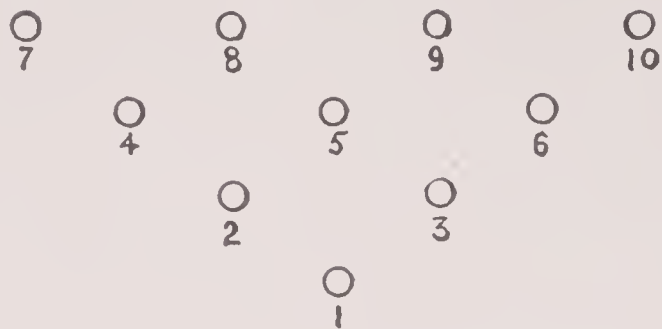
### RULE II—THE GAME

The game to be played shall be the American ten-frame game, and shall be played on a regulation alley with regulation pins and balls.

## RULE III—THE ALLEY

SECTION 1. A regulation alley shall be not less than forty-one, nor more than forty-two inches in width, shall be sixty feet in length from the center of the spot on which the head pin is placed, to the foul line, and shall have a run back of the foul line at least fifteen feet in length.

The spots on the alley shall be twelve inches apart from center to center, and the center of the four spots on the back row must be three inches from the edge of the pit. The spots must be two and one-quarter inches in diameter, and made so distinctly that they can be plainly seen by the person setting up the pins, each spot to be properly numbered (as in Figure VI.)



(Fig. VI)

SEC. 2. The gutters on each side of the alley shall extend from the foul line to the pit. They shall be two inches deep and eight and three-quarters, or not more than nine inches, wide, and shall incline downward from a point about opposite the head pin to the pit, so that the gutter, where it enters the pit, shall be three and one-half inches in depth below the surface of the alley.

SEC. 3. The pit shall be ten inches deep below the surface of the alley to the cushion or mat, and shall not be less than two and one-half feet long from the alley to the swinging cushion at the rear. The cushion shall be constructed, as far as possible, so as to prevent the rebounding of pins from it to the alley. No cushion shall be attached to the partitions between, or at the sides of the alley, or gutters, at any point opposite the pins; but the partitions may be covered with one layer of leather (no other substance may be used), not to exceed half an inch in thickness. The outside of the coverings on said partitions must be twelve inches from the center of the nearest corner pin spot. The rear swinging cushions must have dark-colored covers.

## RULE IV—THE PINS

SECTION 1. A regulation pin shall be fifteen inches in height, two and one-quarter inches in diameter at the bottom, twelve and one-quarter inches in circumference (two and one-quarter inches from the bottom), fifteen inches in circumference at the body, or thickest part (four and one-half inches from the bottom), eleven and five-eighths inches in circumference (at a height of seven and one-quarter inches from the bottom) five and one-quarter inches in circumference at the neck (ten inches from the bottom), and eight inches in circumference at the thickest part of the head (thirteen and one-half inches from the bottom); it shall taper gradually from the bottom to the largest part of the body, shall be of uniform weight, and shall be stamped "A. B. C. Regulation Pin." The manufacturer's name and address may also be stamped thereon.

## RULE V—THE BALL

SECTION 1. The ball shall not exceed twenty-seven inches in circumference in any direction, but smaller balls may be used.

SEC. 2. Alley balls used in match games, when properly marked, shall be considered the private property of the owners or custodians, and no others shall be allowed to use them without their consent.



## RULE VI—FOUL LINE AND FOUL BALL

SECTION 1. In all games there shall be a line, not more than an inch in width, drawn or painted on the surface of the alleys and gutters, the center point of which shall be sixty feet from the center of the head or front pin spot, measuring to the outside of the line, which, if possible, shall be continued upward at right angles at both ends. This shall be known as the *foul line*.

SEC. 2. A player in delivering a ball must not step on or over this line, nor allow any part of his body or clothing to touch on or beyond the line until after the ball has reached the pins. Any ball so delivered shall be deemed foul, and must be so announced at once by the umpire. The player forfeits all pins made by such foul ball, and such pins, if any, shall be respotted before the next ball is rolled. Should any ball delivered leave the alley before reaching the pins, or any ball rebound from the back cushion, the pins, if any, made on such ball shall not count, but must be respotted. All such balls shall count as balls rolled. Pins knocked down by a pin or pins rebounding from side or back cushion shall count as pins down.

## RULE VII—DEAD BALLS

If any player roll on the wrong alley, or roll out of turn, or is interfered with by a spectator or other bowler; or if any of the pins he is playing at be knocked down or disturbed in any way before his ball reaches them; or if his ball, after being fairly bowled, should come in contact with any obstacle on the alley before reaching the pins; or if the player bowl before all the pins are in their places; the umpire shall immediately declare such ball "dead," and shall allow the player to roll again after replacing the pins as they were before such ball was rolled.

## RULE VIII—DEADWOOD

Pins knocked down, but remaining on the alley or in the gutters, are termed "deadwood," and must be removed from the alley before the next ball is rolled. Should a pin fall when the "deadwood" is being removed, it must be respotted and pin or pins rebounding from any other alley must be respotted.

## RULE IX—THE COUNT

SECTION 1. Two balls shall be allowed for each frame, except when a strike is made, as designated below, or when a spare is made in the last frame, which must be completed before leaving the alley, and on the same alley as made.

### STRIKES

SEC. 2. A *strike* is credited when the player bowls down the ten pins with the first ball delivered in any frame. It is designated by a cross (X) in the upper right-hand corner of his frame, and the player is credited with whatever pins he may make on his next two balls, in addition to the ten already credited by the strike.

### SPARES

SEC. 3. A *spare* is credited whenever a player clears the alley with the first and second ball. It is designated by a small line (\) in the upper right-hand corner of the frame in which it is made, and the total score in that frame is left open till the player shall have rolled one ball in his next turn, when the number of pins knocked down by such ball are immediately added to the ten credited by the spare. In the last frame, the player finishes before leaving the alley, as hereinbefore provided.

## BREAKS

SEC. 4. A *break* is charged to a player at all times when neither a strike nor a spare is made. Then the player is allowed only the total number of pins down.

In addition to the game of Tenpins, which has been described, there are numerous other Bowling games, which differ from it only in a few minor points. A glance at the following rules will enable you to understand how several of the most common of the other games are played, and wherein they differ from the ordinary game of Tenpins.

## COCKED HAT

IN THE game of Cocked Hat, the head pin and the two corner pins (Nos. 7 and 10) are left standing, as indicated in the diagram.

Balls not exceeding five and one-half inches in diameter must be bowled, and they must be rolled down the alley, not cast or thrown. The rules of the game of American Tenpins generally govern this game, except in St. Louis and the Northeast, where there are local rules. In scoring, each pin counts one, so that when a strike or a spare is made the count before the extra balls are rolled is three. "Poodles," or balls rolled down the gutter, are fair balls, and any pin or pins knocked down by them are counted. The maximum score that can be made in this game is ninety.

The pins used in Cocked Hat games must be seventeen inches in height, five and one-fourth inches in diameter and two and one-fourth inches across the bottom. They must be as nearly uniform in weight as possible.

## COCKED HAT AND FEATHER

THE pins are set up as shown in the diagram, the center pin being the *feather*.

RULE 1. Ten innings constitute a game, and three balls (not exceeding six inches in diameter), must be used in each inning.

RULE 2. All the pins except the feather have to be bowled down, or the inning goes for naught.

RULE 3. If the feather is left standing alone, the inning counts one.

RULE 4. There are no penalties. The deadwood must be removed. Any pins knocked down through the deadwood remaining on the alley cannot be placed to the credit of the bowler.

RULE 5. The maximum score is ten.



## QUINTET

## ARRANGEMENT OF PINS

RULE 1. There shall be five pins placed upon regulation spots and arranged as in the diagram.

The head pin (No. 1) is placed on the same spot as the head pin in the game of Tenpins; pin No. 4 on the same spot as No. 7 in Tenpins and pin No. 5 on the same spot as No. 10 in Tenpins. The pins numbered 2 and 3 are placed on spots exactly half-way between, and in line with the head pin and the pins numbered 4 and 5 respectively.



## THE PIN

RULE 2. A regulation Quintet pin shall be twelve and three-sixteenths inches in circumference at the body or thickest part (three and three-fourths inches from the bottom), four inches in circumference at the neck (eight and three-eighths inches from the bottom), and six and three-sixteenths inches in circumference at the thickest part of the head (ten and five-eighths inches from the bottom), and shall taper gradually from the bottom part of the body to a diameter of two inches at base of pin. The pins shall be twelve inches in height and of uniform weight.

## THE BALL

RULE 3. The ball shall not exceed five inches in diameter, but smaller balls may be used.

## GENERAL RULES

RULE 4. The rules of the game of Tenpins shall govern the game of Quintet in all points not mentioned herein.

## NINE UP AND NINE DOWN

THE pins are set up the same as for the game of Tenpins.

RULE 1. Three balls (not exceeding six inches in diameter) are bowled in each inning.

RULE 2. The player must knock down a single pin, which counts one; then, with the two remaining balls he endeavors to leave one pin standing, which counts one. Failing to do either, the inning goes for nothing.

RULE 3. No penalties are attached. Deadwood must be removed. Any pins knocked down through the deadwood remaining on the alley cannot be placed to the credit of the player.

RULE 4. Ten innings constitute a game.

RULE 5. The maximum score is twenty.

## HEAD PIN AND FOUR BACK

THE pins are set up as shown in the diagram.

RULE 1. Three balls (not exceeding six inches in diameter) are allowed in each inning.

RULE 2. If the four back pins are bowled down and the head pin is left standing, the score is two. If all the pins are bowled down the score is one.

RULE 3. There are no penalties. The deadwood must be removed. Any pins knocked down through the deadwood remaining on the alleys cannot be placed to the credit of the player.

RULE 4. Ten innings constitute a game.

RULE 5. The maximum score is twenty.

#### FOUR BACK

THE pins are set up as shown in the diagram.

RULE 1. Three balls (not exceeding six inches in diameter) are allotted to each inning.

RULE 2. Each pin counts as spotted, and only one pin can be made at a single roll. If only one pin is made in a frame it is termed a break, and the player loses that frame and scores nothing.

RULE 3. There are no penalties. The deadwood must be removed. Any pins knocked down through the deadwood remaining on the alley cannot be placed to the credit of the player.

#### AMERICAN NINEPINS

THE pins are set up as shown in the diagram.

RULE 1. Ten innings constitute a game.

RULE 2. Three balls (not exceeding six inches in diameter) are bowled.

RULE 3. One pin of the frame must be left standing, or the inning goes for nothing.

RULE 4. There are no penalties. The deadwood must be removed. Any pins knocked down through the deadwood remaining on the alley cannot be placed to the credit of the player.

RULE 5. The maximum score is ten.

#### FIVE BACK

THE pins are set up as shown in the diagram.

RULE 1. Three balls (not exceeding six inches in diameter) are bowled in each inning.

RULE 2. Should a left-handed bowler be bowling, the second quarter pin can be set up on the left quarter spot.

RULE 3. Strikes and spares count five each.

RULE 4. No penalties are attached. Deadwood must be removed. Any pins knocked down through deadwood remaining on the alley cannot be placed to the credit of the player.



RULE 5. Ten innings constitute a game.

RULE 6. The maximum score is one hundred and fifty.

### THE NEWPORT GAME

THE pins are set up as in the game of Tenpins.

RULE 1. Three balls (not exceeding six inches in diameter) are allowed in each inning.

RULE 2. Ten frames constitute a game. The object of the game is to bowl an exact number of pins from one to ten, but not necessarily in routine order. The player who, in ten innings, scores the least number of winning innings is the loser. For instance, A bowls down 2, 5, 7, 8, and 10; B bowls down 1, 6, 8, and 9. Here B loses, as A has one more inning to his credit than B.

NOTE.—As the larger numbers of pins are easy to obtain, the superior skill lies in picking out the small numbers. For this reason the "pony" ball is used, and the small numbers are the points of attack from the start. When the player has bowled down a certain number of pins corresponding with any score he has made, and his remaining ball or balls will be of no avail, an x is placed under his name, indicating that the inning goes for naught.

RULE 3. Only one score is allowed for each inning. Players alternate in the use of alleys.

RULE 4. Balls bounding from the cushions go for naught.

### TENPIN HEAD-PIN GAME

THE pins are set up as in the game of Tenpins.

RULE 1. Each player is permitted to roll twelve balls.

RULE 2. The pins are respotted after each ball is rolled.

RULE 3. In order to make a count, the head or front pin must be hit first, and then each pin down is counted.

A player is generally permitted to roll six balls consecutively on each alley, when two alleys are in use. On three alleys, four balls are rolled on each alley; and if four alleys are used, three balls are rolled on each. The maximum score is one hundred and twenty—twelve tens, which, in Tenpins, would be equal to the maximum score of three hundred. With the above exceptions, the game is governed by the rules of the American Bowling Congress.

### DUCK-PIN GAME

THE pins are spotted as in the game of Tenpins.

RULE 1. A regulation Duck Pin shall be nine inches in height, one and one-half inches in diameter at the top, three and one-half inches in diameter at the body of the pin, and one and three-eighths inches in diameter at the base; it shall taper gradually from the bottom to the largest part of the body, and the pins shall be as nearly uniform in weight as possible.

RULE 2. No ball exceeding four and one-half inches in diameter shall be used.

RULE 3. Each player shall roll three balls to each frame, and shall roll two frames at a time.

**RULE 4.** A line shall be drawn ten feet beyond the regular foul line, and any ball delivered beyond the first-named line shall be declared foul.

With the above exceptions, the game is governed by the rules of the American Bowling Congress.

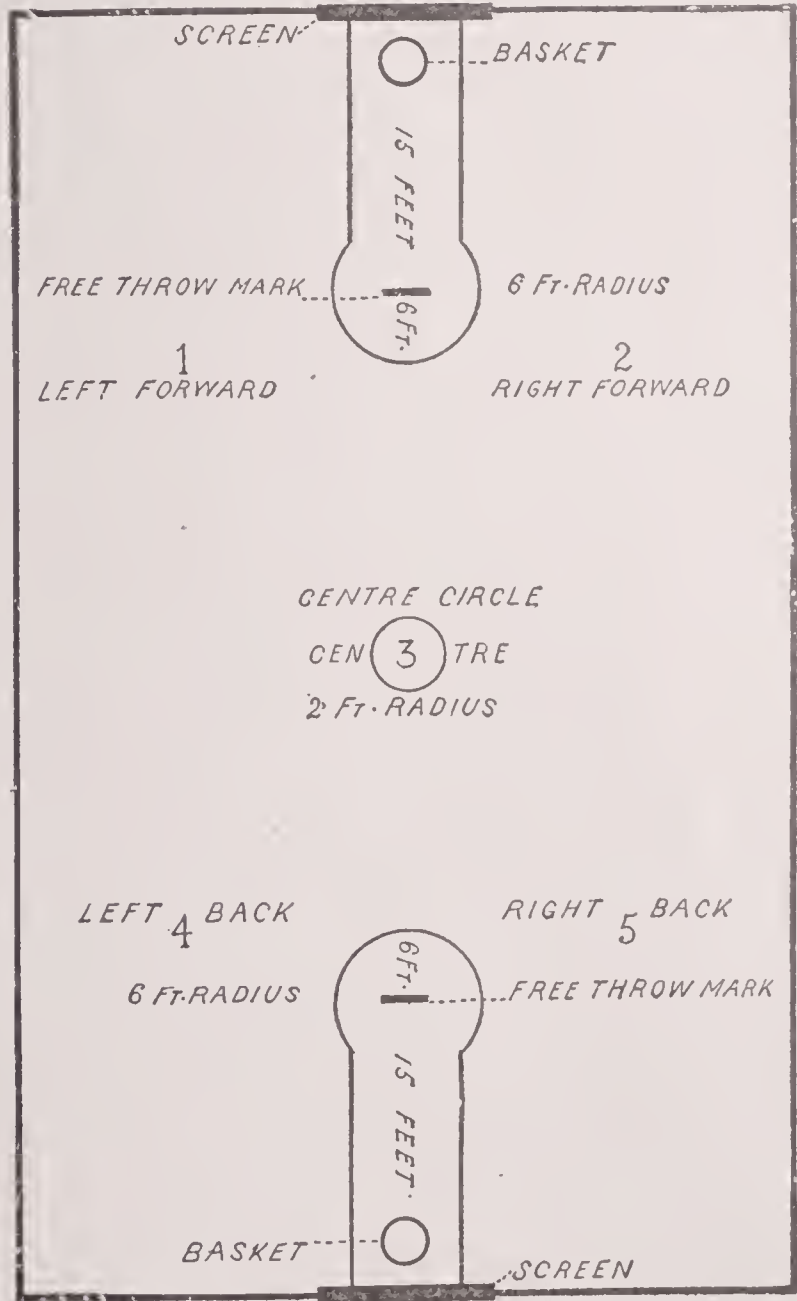
BASKET-BALL

WITHOUT losing any of its popularity as a game for men, Basket-ball has become the most popular of the heavy athletic sports for women. Although invented less than ten years ago, its growth in public favor has been remarkable, and at the present time it is played by schools, colleges, athletic associations and clubs, in all parts of this country.

The game was originally invented as a sort of indoor substitute for football, and as now played, it combines many of the principal elements of that game. It cultivates physical strength and endurance in a way that makes it

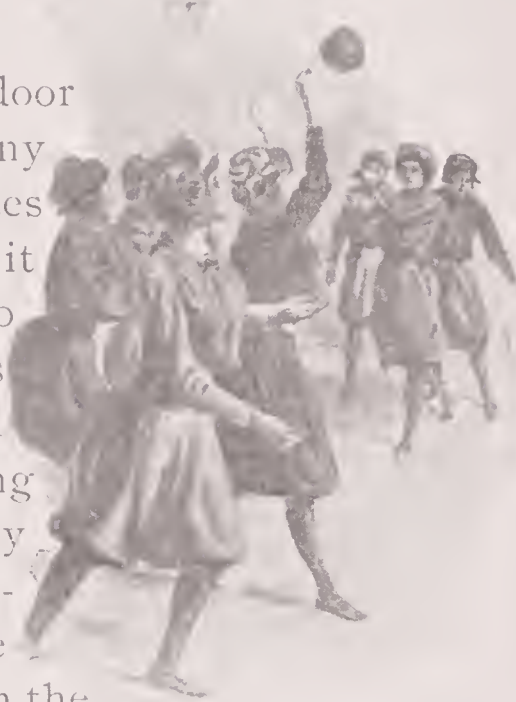
peculiarly adapted to women, and, besides being taught in nearly all training schools, is played by hundreds of Basket-ball teams that are formed by women in the various cities and towns. In some cases, women play by the same rules that are applied to men's games, but some modifications of these rules have been found desirable in order to do away with certain elements that are objectionable in a game for women.

Basket-ball may be played on any level space that is free from obstructions; such space should be fifty by seventy-five feet in extent. These dimensions are not arbitrary, but the field of play must contain not less than three thousand five hundred square feet.



(Fig. 12)

It is laid out as indicated in the accompanying diagram. (Fig. 12.)





The boundary lines should be plainly marked, and the side boundaries should be at least three feet from the wall or other limit of the field. The game is usually played indoors, and two walls are often taken as the end limits of the field of play. If this be not done, a perpendicular screen made of boards, wire netting, or other suitable material, is erected in the middle of each end line. (Fig. 12½.)

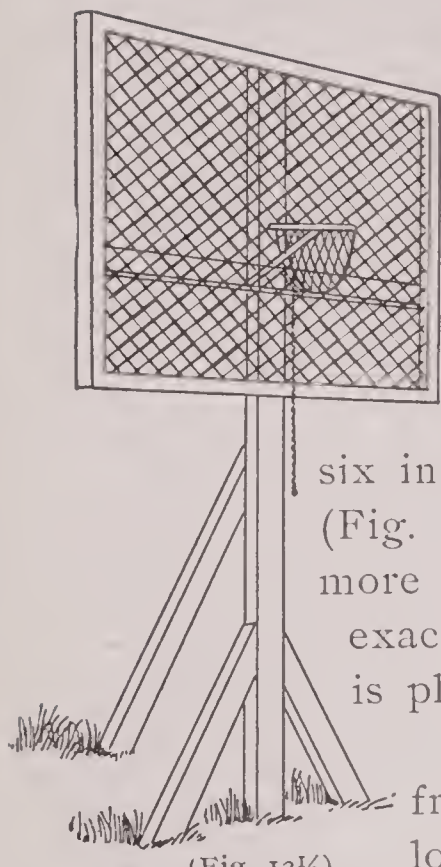
The two goals, which are basket-shaped nets eighteen inches in diameter at the top, are placed at a height of ten feet above the middle of the end lines, with their rims six inches from the walls or screens from which they are supported. (Fig. 13.) The screen may be of any width, but must not extend more than one foot from the upper rim of the basket. In the exact center of the field of play, a circle with a radius of two feet is plainly marked.

At a point fifteen feet from the spot directly below each goal, and in the imaginary center line of the field, a mark is made, which is called the "free-throw mark." Around this mark a circle with a radius of six feet is described, and from this circle a lane six feet in width, leading to the wall or screen, is plainly marked on the field.

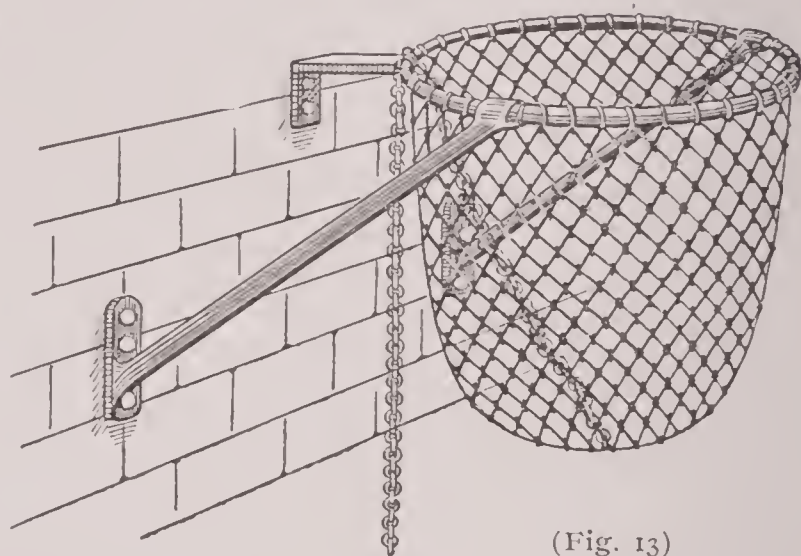
The ball that is used (Fig. 14) is similar to a football, except that it is round; it is about thirty inches in circumference, and usually weighs about eighteen ounces.

The object of each team is to get the ball into the goal of the opposing team, and to prevent the ball from being lodged in its own goal. The game is divided into two halves of twenty minutes each, with an interval of ten minutes between them for rest. In the regular game for men, five players constitute a team, and they are respectively designated, according to the part taken by them in the game, *center*, *right forward*, *left forward*, *right back*, and *left back*. Their positions on the field are shown in the accompanying diagram. (Fig. 15.)

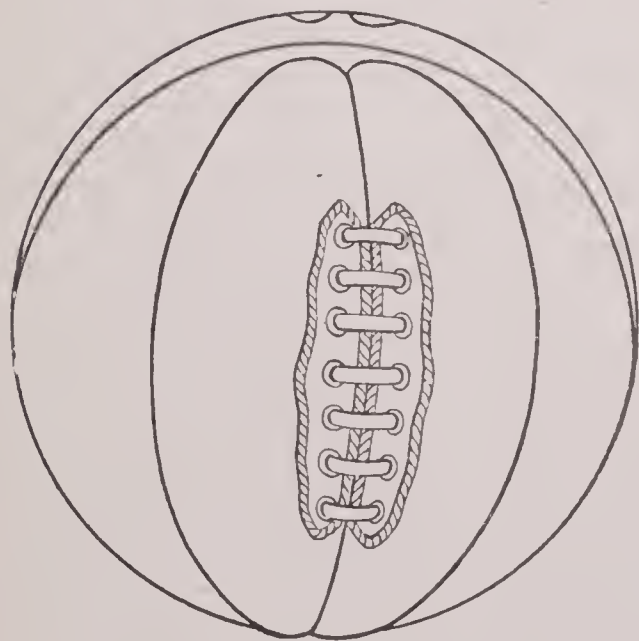
Each player of the side that has not the ball in its possession opposes the one of the other team who is playing the same relative position, so that center is opposed to center, forward to forward, and back to back.



(Fig. 12½)



(Fig. 13)



(Fig. 14)

Before beginning the game, a referee, two umpires, a timekeeper, and a scorer are selected. The referee is the judge of the ball, and decides to which side it belongs, and when it is in play. The two umpires are the judges of the players and of fouls. They make their decisions independently of each other.

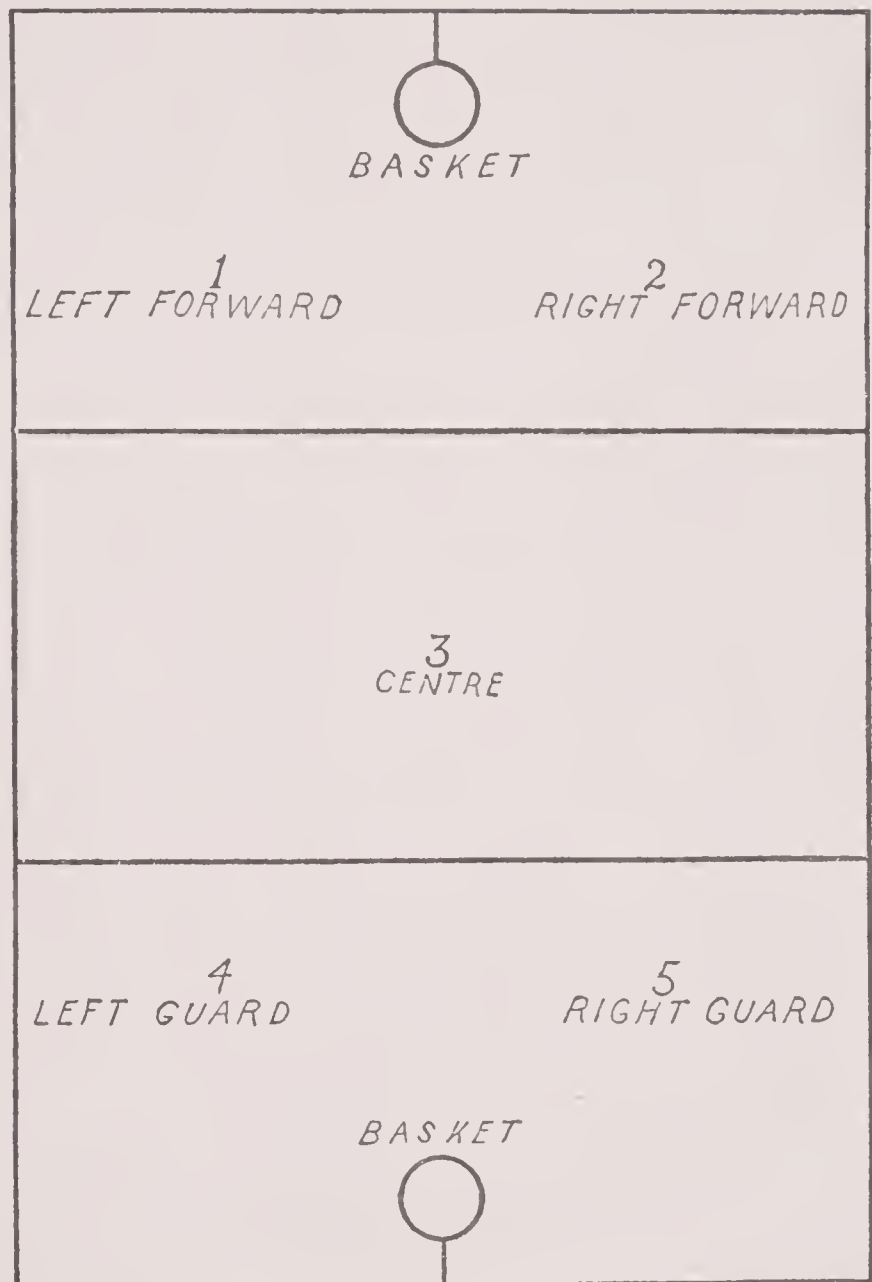
In beginning the game, the referee takes the ball to the center of the field, and tosses it into the air in a plane at right angles to the side boundaries, so that it will fall near the center mark. The two centers stand within the center circle, each on the side of the referee that is nearest to his own goal, and when the ball is tossed both jump for it. This is done at the beginning of each half and whenever a goal has been made. The ball is in play after it has been touched by either of the centers, and the members of each team then unite in attempting to lodge it in their opponents' goal.

If the ball goes out of bounds, it belongs to the player who first touches it, and he throws it into the field at the point where it went out. The players of the opposing team may stand

on the boundary line and try to stop the throw, but they may not go out of bounds to do so. After time has been called, the referee puts the ball in play by tossing it into the air so that it will fall near the spot where it was when time was called.

No player is allowed to hold, kick, or carry, the ball, or to hold, tackle, or push, an opponent; violation of this rule constitutes a foul of class A.

If a player trips an opponent, or is unnecessarily rough, he may be excluded from the game on the second offense; this constitutes a foul of class B. When a foul has been made, the game is stopped, and a player of the other side has a free throw at the goal of the offending



(Fig. 15)



side. This throw is made from the *free-throw mark*, and no player may interfere with the thrower, or may be within the six-foot circle surrounding the free-throw mark, or the lane leading from it to the screen or wall. If the goal is made, the ball is taken to the center of the field and is put in play by the referee in the same way as at the beginning of the game; if the goal is missed, the ball is in play and the game goes on as before.

A goal made during the ordinary play counts two points; if made from a free throw, the goal counts one point. The game is won by the team scoring the greater number of points during the two halves. If the scores of the two teams are equal at the end of the time allotted for play, the game goes on until one side scores two more points.

In Basket-ball, as in football, much more depends upon the extent to which the members of a team work together than upon the individual excellence of the player. The ideal team is one in which the members play in such thorough harmony with one another that each seems to know intuitively just what the others will do under given conditions, and the part of the field in which each will be found at all times during the game.

Following are the rules for Basket-ball adopted by the Amateur Athletic Union and the Young Men's Christian Association Athletic League of North America:—

#### RULE I—THE COURT

SECTION 1. Basket-ball may be played on any ground free from obstructions, said ground not to exceed three thousand five hundred square feet of actual playing space.

SEC. 2. There must be a well-defined line marked around the floor or field. The side boundaries shall be at least three feet from the wall or fence. The end boundaries shall be directly below the surface against which the goal is placed. This line shall form the boundary of the field of play.

#### RULE II—THE BALL

SECTION 1. The ball shall be round, and shall be made of a rubber bladder covered with a leather case. It shall not be less than thirty nor more than thirty-two inches in circumference, and the limit of variableness shall not be more than one-fourth of an inch in three diameters. It shall not weigh less than eighteen, nor more than twenty ounces.

SEC. 2. The ball shall be provided by the home team. It shall be tightly inflated and so laced that the ball cannot be held by the lacing, and shall be otherwise in good condition.

SEC. 3. The ball made by A. G. Spalding & Bros. shall be the official ball.

SEC. 4. The official ball must be used in all match games.

#### RULE III—THE GOALS

SECTION 1. The goals shall be hammock nets of cord, suspended from metal rings eighteen inches in diameter (inside). The rings shall be placed ten feet above

the ground in the center of the short side of the actual playing field. The inside rim shall extend six inches from the surface of a flat perpendicular screen, or other rigid surface, measuring at least six feet horizontally and four feet vertically. If a screen is used, it must not extend more than one foot below the upper edge of the goal.

SEC. 2. The goal shall be rigidly supported from below. There must be no projections beyond the sides nor above the upper edge of the goal.

SEC. 3. The goal made by A. G. Spalding & Bros. shall be the official goal.

#### RULE IV—THE PLAYERS

SECTION 1. Teams for match games shall consist of five men.

SEC. 2. In match games all players must have been *bona fide* members of the Association, Branch, Department or Organization which they represent, for at least thirty days.

SEC. 3. In match games no member of one team shall play or act as substitute on any other team in that league.

SEC. 4. Physical Directors, or their salaried assistants, shall not play in match games.

#### RULE V—THE OFFICIALS

SECTION 1. The officials shall be a Referee, two Umpires, a Scorer and a Timekeeper.

SEC. 2. In each league game the local governing committee shall pay the actual expenses of the officials.

#### RULE VI—THE CAPTAINS

SECTION 1. Captains shall be indicated by each side previous to the beginning of a match; they must be players in the match.

SEC. 2. The captains shall be the representatives of their respective teams.

SEC. 3. The captains shall toss for choice of goals, and shall be entitled to call the attention of the officials to any violation of the rules which they think has been made.

SEC. 4. Before the beginning of a match, each captain shall furnish the scorer with a list of his team with their positions.

#### RULE VII—DUTIES OF THE REFEREE

SECTION 1. The referee in all cases must be a thoroughly competent and impartial person, and shall not be a member of either of the competing organizations.

SEC. 2. In all but championship games, the home team shall choose the referee, but shall notify visiting teams of such selection not later than four days before the date fixed for the game. Any team neglecting to send such notifications within the limit specified, shall forfeit to visiting clubs the right to appoint the referee.

SEC. 3. In all championship games the referee shall be selected by the Championship Committee.

SEC. 4. Before the game begins, the referee shall see that the regulations respecting the ball, goal, and grounds are adhered to. By mutual agreement of the captains, the referee may allow alterations in the rules regarding grounds and time, but not in goal, ball or team. The referee shall ascertain before the beginning of the game the time for beginning, or any other arrangements that have been made by the captains.



SEC. 5. The referee shall be judge of the ball. He shall decide when the ball is in play, to whom it belongs, and when a goal has been made.

SEC. 6. The referee shall approve of the timekeeper and scorers before the game begins.

SEC. 7. Whenever the ball is put in play by tossing it up, the referee shall stand so that he shall throw the ball in a plane at right angles to the side lines.

SEC. 8. The referee shall call time, when necessary, by blowing a whistle.

SEC. 9. No player but the captain shall address any official. The referee shall call a foul for violation of this rule.

SEC. 10. The referee is the superior officer of the game and shall decide all questions not definitely falling to the umpire, but shall have no power to alter a decision of the umpires when it is in regard to matters under their jurisdiction.

SEC. 11. Any team refusing to play within three minutes after receiving instructions to do so from the referee shall forfeit the game.

SEC. 12. The referee's term of office shall extend only from the time the game begins until it is concluded, and his decision awarding the game must be given then. His jurisdiction shall then end, and he shall no longer have any power to act as referee.

SEC. 13. The referee shall have power to give the game to the visiting team in accordance with Rule XI, Sec. 36.

SEC. 14. The referee shall disqualify men according to Rule XI, Secs. 21 and 39.

SEC. 15. The referee shall notify the secretary of the committee under whose jurisdiction the game has been played, whenever a player has been disqualified, giving the player's name, date, place, name of team and nature of the offense. The referee shall call fouls when the following rules are violated: Rule VII, Sec. 9; Rule XI, Secs. 35 and 38.

#### RULE VIII—DUTIES OF THE UMPIRE

SECTION 1. The umpires, in all cases, must be thoroughly competent and impartial persons, and shall not be members of either of the competing organizations.

SEC. 2. In all but championship games the visiting team shall choose the umpires, but shall notify the home team of such selection not later than four days before the date fixed for the game. A team neglecting to send such notification within the limit specified shall forfeit to the home club its right to appoint the umpires.

SEC. 3. In all championship games the umpires shall be selected by the Championship Committee.

SEC. 4. The umpires shall be judges of the men and shall call all fouls, except as provided in Rule VII, Sec. 9; Rule XI, Secs. 35 and 38.

SEC. 5. The umpires shall make their decisions independently of each other, and a foul called by one shall not be questioned by the other.

SEC. 6. Whenever a foul is called, the umpire calling it shall call time by blowing a whistle, and shall indicate the offender. He shall notify the scorer of the player fouling and the nature of the foul.

#### RULE IX—DUTIES OF THE SCORER

SECTION 1. The scorer shall be appointed by the captain of the home team.

SEC. 2. He shall notify the referee when a player should be disqualified, according to Rule XI, Sec. 21.

SEC. 3. Official games shall be scored according to the details in the official score blanks.

#### RULE X—DUTIES OF THE TIMEKEEPER

SECTION 1. A timekeeper shall be appointed by the captain of the home team.

SEC. 2. He shall note when the game starts, and shall blow his whistle at the expiration of twenty minutes actual playing time in each half.

SEC. 3. Time consumed by stoppage during the game shall be deducted only on order of the referee.

#### RULE XI—THE GAME

SECTION 1. A goal made from the field shall count two points; a goal made from a foul shall count one point; a goal thrown shall count for the side into whose goal the ball is thrown, even though it was done by mistake. The ball must enter and remain in the basket until after the referee's decision in order to constitute a goal.

SEC. 2. The referee shall put the ball in play by tossing it up in a plane at right angles to the side lines, so that it will drop near the center of the field, which shall be indicated by a conspicuous mark. This is to be done at the opening of the game, at the beginning of the second half and after each goal.

SEC. 3. After the referee puts the ball in play in the center, it must first be touched by one of the center men, who shall have been previously indicated to the referee. The umpire shall call a foul for violation of this rule. Both men may jump for the ball, the better man, of course, gaining the advantage. When two fouls are called at once on opposite sides, they should be thrown in succession. The ball should then be put in play in the center.

SEC. 4. After time has been called, the referee shall put the ball in play by tossing it up in such a manner that it will drop near the spot where it was when time was called, unless it was held out of bounds. In this case play shall be resumed at the whistle of the referee, as if time had not been called. (Rule VII, Sec. 7.)

SEC. 5. The two opponents nearest this spot when time was called shall be the first to touch the ball after play is resumed. They shall be indicated by the referee.

SEC. 6. When the ball is held by two or more players for any length of time the referee shall blow his whistle, stop the play, and throw the ball up from where it was held. (Rule VII, Sec. 7; also Rule XI, Sec. 5.)

SEC. 7. Whenever the ball is put in play, the players who are to touch the ball first must not stand farther than two feet from the spot where the ball is to fall.

SEC. 8. A game must be decided by the winning of the most points in forty minutes playing time.

SEC. 9. In case of a tie, the game shall continue (without exchange of goals) until either side has made two additional points; the team which first scores two points wins. The goals may be made from either field or foul line.

SEC. 10. If the goal is touched by an opponent when the ball is on the edge of it, one point shall be scored for the other side.

SEC. 11. For seniors the game shall consist of two halves of twenty minutes each, with a rest of ten minutes between the halves. For juniors the halves shall be fifteen minutes in length, with a rest of ten minutes between the halves. This is the time of actual play. These times may be changed by mutual agreement of the captains.



SEC. 12. The teams shall change goals at the end of the first half.

SEC. 13. When a foul has been made, the opposite side shall have a free throw for the goal at a distance of fifteen feet from a point on the floor directly beneath the center of the goal, measured toward the opposite goal. The player having a free throw shall not cross the fifteen-foot line until the ball has entered or missed the goal. If this rule be violated, a goal, if made, shall not be scored, and, if missed, the ball shall be dead and must be put in play at the center. The ball cannot be thrown to any person, but must be thrown at the basket. An attempt satisfactory to the referee must be made to cage it.

SEC. 14. No player shall stand nearer than six feet to the thrower, nor in a lane six feet in width from the thrower to the goal, nor interfere with the ball until after it reaches the goal. He shall not be interfered with in any way whatsoever, by either player or spectators. If this rule is violated by one of his own side and a goal is made, it shall not count, and whether missed or made, the ball shall be thrown up at the center. If the goal is not made, and no rules have been violated, the ball shall be in play. The players must stay back of the line until the ball has entered or missed the goal.

SEC. 15. The ball may be thrown or batted in any direction with one or both hands.

SEC. 16. The ball shall not be kicked or struck with the fists. The umpire shall call a foul for violation of this rule.

SEC. 17. A player shall not carry the ball while in bounds. He must play it from the spot on which he catches it. Allowance is to be made for one who catches it while running, provided he throws it at once, or stops as soon as possible. This shall not be interpreted as interfering with a man's turning around without making progress. The umpire shall call a foul for violation of this rule.

SEC. 18. A man may touch the ball with both hands but once; it makes no difference at what point this occurs. He may catch it with both hands, then dribble it with one hand, but cannot touch it with both hands until some one else has played it. Or he may get the ball with one hand, and dribble it some distance, and then take it with both hands and throw it. In dribbling with one hand there is nothing to prevent the hands being used alternately. The ball must be played by another player; touching him is not sufficient. The principle is that he can take it with both hands but once in a single play. This does not interfere with his throwing for goal twice or more in succession, even if no other player touches it between times. The player who dribbles the ball cannot throw for goal until the ball has been played by another player. The umpire shall call a foul for violation of this rule.

SEC. 19. The ball shall be held by the hands only. The using of any other part of the body to hold or assist in holding the ball constitutes a foul. The umpire shall call a foul for violation of this rule.

SEC. 20. There shall be no tackling, holding, or pushing of an opponent. The arms shall not be used in any way to interfere with the progress of a player who has not the ball. Grasping the clothing or person of a player with the hands, or putting one or both arms about a player, shall be called holding. The umpire shall call a foul for violation of this rule.

SEC. 21. There shall be no shouldering, tripping, striking, kicking, hacking or intentional or unnecessary roughness of any kind. Violation of this rule constitutes a foul, and the referee may, for the first offense, and shall, for the second offense,

disqualify the offender for the game and for such further period as the committee in charge of that league shall determine; provided, that disqualification for striking, hacking or kicking shall be for one year, except by alteration of penalty in any special case by the proper Registration Committee of the Amateur Athletic Union, or the Governing Committee of the Athletic League of the Young Men's Christian Association. A foul is a violation of the rule, whether committed unintentionally, ignorantly, or otherwise. The fact that a foul is made is the only guide for the officials in calling the same. The umpire shall call a foul for violation of this rule. The referee shall disqualify for violation of this rule.

SEC. 22. A substitute shall be allowed for a player who has been disqualified, and the foul made by him shall be counted.

SEC. 23. Whenever, on account of sickness or accident to a player, it becomes necessary for the referee to call "time," play must be resumed in five minutes. If the injured player is unable to resume play by that time, a substitute shall take his place, or else the game must start at once without him. If a substitute take his place he cannot play again during that game.

SEC. 24. The ball is out of bounds only when it has completely crossed the line.

SEC. 25. When the ball goes out of bounds and rolls or bounces in again, play shall continue, even though a player may have touched it when out of bounds; except that if the whistle of the referee is blown, the ball shall then be put in play as though it had not returned to the field of play.

When the ball goes out of bounds and remains there, it shall be returned by the player first touching it. There shall be no interference with his returning it, that is, no portion of the person of an opponent shall be outside the field of play. The ball may not be touched by an opponent until it has crossed the line. If either of these rules is violated, the ball is to be returned to the player who had it and again put in play at the original place; however, if his opponent knock the ball out of his hands, then Rule XI, Sec. 38, may be applied to this action of the opponent.

He may throw the ball in any direction into the field of play from any spot (outside bounds) in a line at right angles to the boundary line at the point where the ball crossed it. The ball must be thrown, not rolled, into the field of play. When either of these rules is violated, the ball shall go to the opponents at the same spot. The ball must be thrown into the field of play; that is, it must be thrown to some player before the player who passed it in can again play it.

He is allowed five seconds to hold the ball, and if he holds it longer it goes to his opponent. In case of doubt in the mind of the referee as to which player first touched the ball, he shall toss it into the field of play at the spot where the ball went out.

SEC. 26. When the ball is batted, rolled, or passed from the field of play in order to claim exemption from interference, it shall be given to the opponents at the point where it left the field of play. When it is passed to a player out of bounds, the ball shall be given to the other side. Carrying the ball from the field of play constitutes a foul (Sec. 17). When the center men are jumping for the ball, and one of them bats it out of bounds, it is in play and shall go to the other side.

SEC. 27. When a player makes a throw for goal while any part of his person is out of bounds, the ball shall be put in play in the center of the field of play. If a goal is made, it shall not be scored.



SEC. 28. If a player throws for the goal and the whistle of the referee, umpire, or timekeeper sounds while the ball is in the air, and the throw results in a goal, it shall count, except as provided in Section 30 of this rule.

SEC. 29. When the umpire's whistle sounds simultaneously with either the referee's or timekeeper's, the umpire's shall take precedence.

SEC. 30. A goal scored before the whistle can be blown for a foul made by the team scoring, shall not count; but if a player, while throwing for the goal, is fouled by an opponent and succeeds in scoring, both shall be counted.

SEC. 31. If only one team puts in an appearance on the appointed day, the team complying with the terms agreed upon shall be declared the winner of the game by default.

SEC. 32. When it happens, however, that neither team is ready to begin playing at the hour appointed for the game, the team which completes its members first cannot claim a default from its opponent. The latter shall be entitled to fifteen minutes additional time, and if then unable to present a full team, shall, if required by their opponent, be obliged to play shorthanded or forfeit the game.

SEC. 33. A team defaulting or forfeiting a game shall be declared the loser by a score of 2 to 0.

SEC. 34. There shall be no protests against the decision of the officials except in regard to interpretation of rules. (Rule XII, Sec. 4.)

SEC. 35. Any remarks on the part of a player during the progress of the game, derogatory in any way to the officials, shall be called a foul by the referee.

SEC. 36. The home team shall be held responsible for the behavior of the spectators. Failure to keep them from interfering with the progress of the game or from discourteous conduct shall, after a warning, make the home team liable to forfeit the game. (Rule VII, Sec. 13.)

SEC. 37. In case of doubt on any point, in the mind of the referee or umpire, arising from the presence of the spectators, the visiting team shall have the benefit of the doubt.

SEC. 38. Any persistent intentional delay of the game shall be counted as a foul against the team so delaying. The referee shall call this foul.

SEC. 39. The referee shall promptly disqualify any player using profane or abusive language.

## RULE XII—FOULS

SECTION I. All fouls shall be called by the umpire, except as provided in Rule VII, Sec. 9, and Rule XI, Secs. 35 and 38.

SEC. 2. Fouls are classified according to their penalties, as follows:—

*General.* 1. Players addressing officials (Rule VII, Sec. 9). 2. Touching ball in center (Rule XI, Sec. 3). 3. Kicking or striking ball (Rule XI, Sec. 16). 4. Carrying ball (Rule XI, Secs. 17 and 26). 5. Holding ball (Rule XI, Sec. 19). 6. Tackling, holding, pushing opponents (Rule XI, Sec. 20). 7. Delaying game (Rule XI, Sec. 38).

*Specific fouls for which players may be disqualified.* 1. Striking. 2. Kicking. 3. Shouldering. 4. Unnecessary rough play. 5. Tripping. 6. Hacking. (Rule XI, Secs. 21 and 39).

SEC. 3. Officials are expected to be as strict as possible, both with players and spectators. In all cases not covered in these rules, officials are to use their own judgment in accordance with the general spirit of the rules.

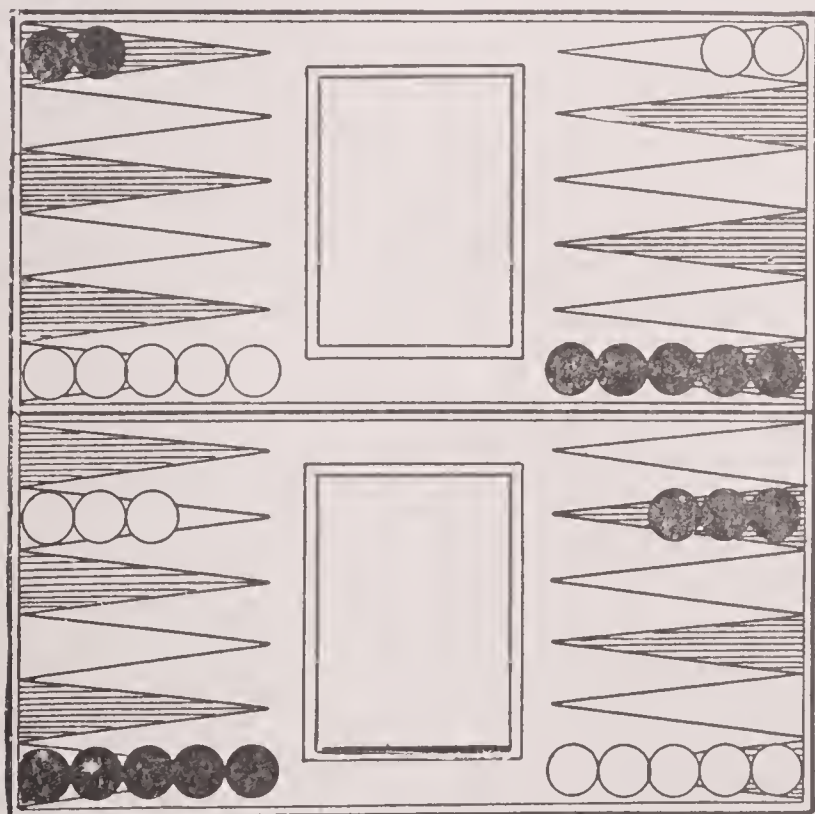
SEC. 4. All questions pertaining to the interpretation of the rules may be referred to the Basket-Ball Committee of the Amateur Athletic Union, P. O. Box 611, New York City, or the Y. M. C. A. Athletic League, 3 W. 29th Street, New York City. Protest must be presented in writing within forty-eight hours.

## BACKGAMMON

THOUGH it belongs to the category of old-fashioned games, Backgammon is still a familiar and attractive form of amusement.

Chance is unquestionably its controlling factor, but, at the same time, the player may exercise considerable judgment and foresight.

The game is played on the two flat, inner surfaces of a shallow box, usually a folding checkerboard. The top half is hinged at one side to the bottom half in such a way that the former may be folded back so as to make the top and bottom of the box one continuous plane surface. The playing-space is marked with twelve points, which are colored alternately white and black (or red), as shown in the accompanying diagram. (Fig. 1). There are two players, each of whom has fifteen pieces, or men, like those used in checkers, half of the set being white, while the others are black or red. The length of each of the points on the board should be nearly five times the diameter of a piece.



(Fig. 1)

The twenty-four points are named as follows (see diagram): The one to the extreme left in White's home, or inner table, is called White's *ace* point; the next, White's *deuce* point, and the others in order White's *trois*, *quatre*, *cinque*, and *six* points. The first or *ace* point in White's outer table is called his *bar* point, and the others in order the *deuce*, *trois*, *quatre*, *cinque*, and *six* points of White's outer table.

The points in Black's inner and outer tables are named in a

similar manner. The positions of the players in the foregoing description have been assumed to be as indicated in the diagram by the words



White and Black; but since the two playing sides of the board are similar, and consequently interchangeable, there is no restriction as to the way in which they are to be disposed with reference to the players. Then, too, the names of each player's table may be interchanged, so that the one at the right will be called the inner table and the one at the left, the outer table. The order of arrangement indicated in the diagram, however, is the one usually followed.

In addition to the board and men, two dice are required, and there is usually a dice box for each player. Dice are cubes, usually of ivory or bone, the sides of which are marked with pips or spots numbering from one to six. These are arranged so that the sum of the number of pips on opposite sides of the die is seven. Dice boxes are small cup-shaped receptacles, which are usually made of leather or pasteboard. In "throwing" dice they are placed in the box, its top is covered by the fingers of the player, and after being shaken or "rattled," they are emptied upon the table.

After the pieces have been arranged on the Backgammon table, in the order that will be described, each of the players endeavors to bring his man around into his home, or inner table by throwing such numbers with the dice as will permit him to do so, and he also tries to move so as to prevent his antagonist from accomplishing the same result. The player who first carries his men home, and then clears them off the board, wins the game.

The men of each player are arranged on the table in the following order: (see diagram) two on the opponent's ace point; five on the player's six point; five on the six point of the opponent's outer table, and three on the player's cinque point. To begin the game, each player throws one die, and the one throwing the highest number has first play. He may either take these two numbers as his first throw, or may throw again. After throwing, the player should call the numbers thrown, in the order of their size. Thus, if he throws five two, he calls cinque deuce, and plays his men accordingly. Each player's men are moved from his opponent's inner table to his outer table, then to the player's outer table, and last to his home table. From this it will be seen that the opposing men are played in opposite directions.

The first player, after having thrown the dice, moves any one of his men to an open point as many points distant as there are pips, either on one die or on both. If he chooses to move the first man the value of one of the dice, he may move another in a similar manner the value of the other die. Thus, White might play cinque deuce, by moving one man from the six point of Black's outer table to the bar point of his own outer table, or by moving one man

from that point to the deuce point of his outer table, and another man from the same point to the cinque point of his outer table. White could play others of his men in a similar manner. When doubles are thrown, the thrower is entitled to move twice the number of points indicated by the pips on the dice. Thus, if he throws double-ace, he may move four points, double-deuce, eight points, and so on. Double-ace is considered the best possible throw.

While White is playing, Black puts the dice into the box and shakes them, and as soon as White's play is completed, throws, calls his throw, and plays it in a manner similar to that described for White. The players have one play at a time, and they alternate throughout the game.

The only limitations to the play are that neither player may play beyond his own home table, or to a point occupied by two or more of his opponent's men. Any part of a throw which cannot be played is lost, but the whole throw must be played if possible. Moving a piece so as to leave it on a point unoccupied by any other piece is called "leaving a blot," and if the adversary moves one of his pieces to that point, he is said to "hit a blot." The first piece is thus captured, or taken, and must be removed from the table and placed on the *bar*, or division between the two halves of the table. It cannot be put in play again until the player to whom it belongs throws the number of a point which is vacant, or is left a "blot," on the opponent's inner table. The man is then "entered" by being placed on that point. Thus, if an ace is thrown, the man is placed on the ace point; if a deuce, on the deuce point, and so on.

A player is not permitted to move any other man while he has a man on the bar. If the opponent has his inner table *made up*, that is, has two or more men on each point, it is obvious that the player who is *up* cannot *enter*, and as it is useless for him to throw, his opponent continues throwing and playing until he leaves a point on his inner table vacant. A player may hit two blots at one play if he throws numbers that enable him to do so, but he is not compelled to hit a blot if the throw can be played without doing so.

The game proceeds as described until one of the players has moved all of his men to his home table. He then *bears* the men, or takes them off the board. To do this, he removes a man from the board whenever he throws a number corresponding to the number of the point on which that man is situated. Or, if he prefers, he may remove one man and play another, or may play both. Thus, if his home table is made up and he throws quatre deuce, he has the following options: to bear one man from his quatre point, and one from his deuce point; to bear one from his deuce point, and play a quatre



from his *cinque* or *six* point; to bear one from his *quatre* point, and play a *deuce* from his *trois*, *quatre*, *cinque* or *six* point; or to play two men which are so situated that they may be moved respectively four and two points.

In a similar manner, doublets entitle a player to bear or play four men. If a player cannot play either part of his throw, he must bear it, and if he throws a number which is higher than any point on which he has a man, he must bear a man from the highest occupied point. When a player has begun bearing his men, if one of them should be hit on a blot, he must enter it on his opponent's inner table. He cannot bear any more men until the one taken up has again entered his own home table. In a manner similar to the foregoing, the adversary bears his men as soon as he has moved them all to his home table. The game is won by the player who first bears all of his men.

The game is counted a *single*, or *hit*, if the adversary has borne one or more men; a *double*, or *gammon*, if he has not borne a man; and a *triple* or *quadruple* game (as agreed upon), or Backgammon, if, when the winner bears his last man, the adversary has a man up or one on the winner's inner table. After a player has borne one man, should another be taken up, he can only lose a hit, even if the adversary wins the game before he has entered the man. When a player has carried home all of his men except two, he may often avoid losing a gammon by throwing doublets of fours or fives. In a series of games, the winner of a hit has the first throw in the succeeding game. But if a gammon or Backgammon is won, the order of play is decided, as in the first game, by each of the players throwing a single die.

#### TECHNICAL TERMS OF BACKGAMMON

*Points.* The twenty-four spaces on the board, colored alternately white and black or red, on which the men are originally placed.

*Throwing Spaces.* The two blank spaces on the table between the rows of points. The dice are thrown on these spaces.

*Men.* The thirty discs with which the game is played. They are similar to the pieces used in checkers. One player has fifteen white pieces, while the other has the same number which are black or red.

*Making a Point.* When two men are played so that both occupy a point which was previously blank, the play is called *making a point*.

*Doublets.* When a player throws so as to turn up similar numbers on the two dice, he is said to throw *doublets*.

*Leaving a Blot.* When in the course of the game, a man is moved to an unoccupied point, the play is called *leaving a blot*.

*Hit a Blot.* If a player moves one of his men to a point occupied by a single opposing man, he is said to *hit a blot*. The man so *hit* is taken from the board and placed on the "bar," or ridge, separating the two halves of the board.

*Entering.* The operation by which a man on the "bar," said to be "up," is put in play. The man is placed on a point of the opponent's inner table corresponding to the number thrown by the player.

*Made up.* When a player has two or more men on each point of his inner table, that table is said to be *made up*.

*Bearing.* When a player has moved all of his men to his home table, he must remove them from the board by *bearing*. A man is removed from the point corresponding to the number thrown by the player.

*Single, or Hit.* A game counts as a *single*, or *hit*, if when it is won, the adversary has borne one or more men.

*Double, or Gammon.* The game counts as a *double*, or *gammon*, if the adversary has not borne a man.

*Triple or Quadruple, or Backgammon.* These terms indicate the value given to a game won when the adversary has a man up, or one on the winner's inner table. The players should agree at the beginning of the game whether a backgammon is to have triple or quadruple value.

## LAWS OF THE GAME OF BACKGAMMON

1. If a player places his men wrongly, the adversary, before throwing, may require that the board be properly furnished.

2. If a player has not all of his men on the board when he throws, he cannot place the ones omitted.

3. The dice must be thrown in one of the tables. If a die jumps from one table to the other, or off the board, or upon the bar or frame, the throw is not allowed and the player throws again.

4. Similarly, if one die rests upon the other, or tilts against it, or against a man, or the bar or frame, the throw is not counted, and the player must throw again.

5. If a die is touched while rolling or spinning on the board, the player not at fault may name the number that shall be played for that die.

6. The same may be done if a die, even when at rest, is touched before the caster has called his throw, and the throw is disputed.

7. If the caster, having mistaken his throw, plays it, and the adversary has also thrown, it is not in the power of either to alter the play, unless they mutually agree to do so.

8. The caster must play the numbers called, if the dice are subsequently touched.

9. If the caster touches one of his own men, he must play it unless he has given notice of his intention to adjust it. If one of the opponent's men, or a man that cannot be played, is touched, there is no penalty.

10. A man is not supposed to be played until it has quitted the point on which it was placed.



11. The whole of a throw must be played if possible. In bearing, if a man is played, and another is then borne from the highest occupied point, the highest number thrown is deemed to be borne.

12. If a man is up, and others are borne before that man is entered, the men borne must be entered again in the same manner as though they were up.

13. If a wrong number of points is played, the adversary may require that the right number be played, but he must do so before his next throw.

### HINTS TO BEGINNERS

WHEN obliged to leave a blot you should, as a rule, leave it where it is least likely to be hit. Under some circumstances it is best to leave a blot where it is likely to be hit, but this does not often occur. The following table gives the odds against being hit, dependent upon the number of points to be moved by the adversary:—

It is about	9 to	4	against being hit by a	1 point move.
“ “	2 “	1	“ “ “ “	2 “ “
“ “	3 “	2	“ “ “ “	3 “ “
“ “	7 “	5	“ “ “ “	4 “ “
“ “	7 “	5	“ “ “ “	5 “ “
“ “	19 “	17	“ “ “ “	6 “ “
“ “	5 “	1	“ “ “ “	7 “ “
“ “	5 “	1	“ “ “ “	8 “ “
“ “	6 “	1	“ “ “ “	9 “ “
“ “	11 “	1	“ “ “ “	10 “ “
“ “	17 “	1	“ “ “ “	11 “ “
“ “	35 “	1	“ “ “ “	12 “ “

This table assumes that there is only one point in range, but if there are others, the odds against being hit will, of course, be greater. On the other hand, if intervening points are held by men belonging to the player who leaves the blot, the odds are less than those given in the table.

Points should be made where there is the best chance of obstructing or hitting an opponent.

### BEST PLAYS

FOLLOWING are the best plays for every possible throw at the beginning of the game:—

*Aces* (best throw). Move two men to your bar point, and two to your six point.

*Sixes* (second best throw). Two men to adversary's bar point, and two to your own bar point.

*Six cinque; six quatre; or six trois.* A man from adversary's ace point as far as he can go.

*Six deuce.* A man from adversary's outer table to cinque point in your home table.

*Six ace.* Move to your bar point.

*Cinques.* Two men from adversary's outer table to trois point in your inner table.

*Cinque quatre.* A man from adversary's ace point to quatre point in his outer table.

*Cinque trois.* Move to trois point in your home table.

*Cinque deuce.* Move two men from the five point in adversary's outer table.

*Cinque ace.* Play the cinque from the five men in adversary's outer table, and the ace from his ace point. If playing for a gammon, play the ace from the six to the cinque point in your home table.

*Quatres.* Move two men from the ace to the cinque point in opponent's inner table, and two from the five men in his outer table. If trying for a gammon, instead of the first part of the foregoing play, move two men from the opponent's outer table to your cinque point.

*Quatre trois.* Move two men from the five in adversary's outer table.

*Quatre deuce.* Move to quatre point in your own table.

*Quatre ace.* Play the quatre from the five men in adversary's outer table, and the ace from his ace point.

*Trois.* Move two men to the cinque point in your home table, and two to quatre point of adversary's inner table. If trying for a gammon, move last two to trois point of your inner table.

*Trois deuce.* Move two men from the five in adversary's outer table.

*Trois ace.* Move to the cinque point in your inner table.

*Deuces.* Play two on the quatre point in your inner table, and two on the trois point in opponent's inner table. If trying for a gammon, play the last two from the five men in opponent's outer table.

*Deuce ace.* Play the deuce from the five men in adversary's outer table, and the ace from his ace point. For a gammon, play the ace from the six to the cinque point in your inner table.

## CHESS

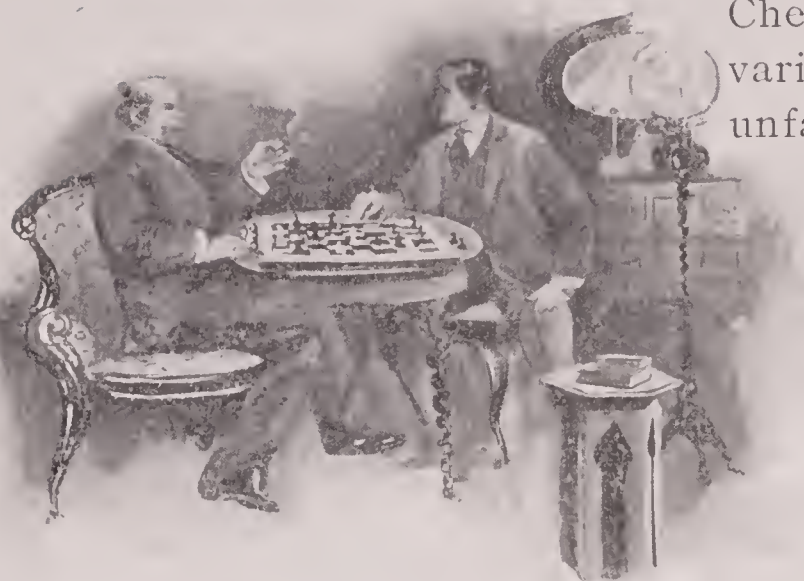
"For Life is a kind of Chess, in which we have often points to gain, and competitors or adversaries to contend with, and in which there is a vast variety of good and ill events that are, in some degree, the effect of prudence, or the want of it."

—BENJAMIN FRANKLIN.

CHESS ranks above all other games, both in antiquity and in intellectual value. It is a fit pastime for sages, since its laws and its technique make it the most profound, precise and complicated of all games; yet it is both beneficial and interesting to the average intellect. It is often regarded as too difficult and too scien-



tific for any but the strongest and most highly cultivated minds, but this is a mistake, since any person of ordinary intelligence can learn to play Chess after a reasonable amount of instruction.



Chess has been called "the game of infinite variety," and therein lies the secret of its unfailing fascination. While in its simpler forms it is undoubtedly a game of amusement, yet its profounder study becomes to some extent a form of mathematical reasoning and develops many useful intellectual qualities. As a form of mental amusement, as a resource in hours of leisure, as a consoler and a means of forgetfulness, it has no

equal among the games of skill or chance.

### THE ARRANGEMENT

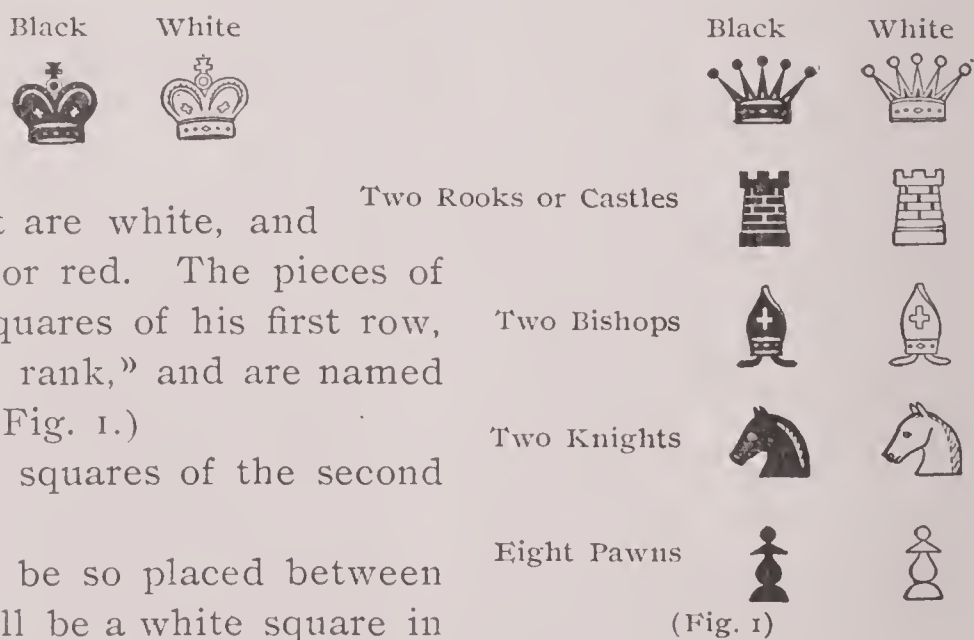
THE game of Chess is played by two persons upon a checkered board which is divided into sixty-four squares, colored alternately white and black or red. Each player is provided with a set of "men," consisting of eight pieces—a king, queen, two bishops, two knights and two rooks or castles,—and eight pawns. Those of one set are white, and those of the other, black or red. The pieces of each player occupy the squares of his first row, which is called the "royal rank," and are named and figured as follows: (Fig. 1.)

The pawns occupy the squares of the second row.

The chessboard must be so placed between the players that there will be a white square in each player's right-hand corner. The rows of squares which run vertically on the board are called "files," those which run from left to right are known as "ranks," while those which run obliquely are called "diagonals."

It is customary to draw lots to determine which player shall use the white men, and the first move is always made with a piece of that color. If a series of games is to be played, the players exchange pieces (and thus colors) at the beginning of each game. The men must be arranged on the board in the order shown in the accompanying diagram.

Observe that the queens are always placed upon squares of their own color. The rooks occupy the corner squares, the knights are placed next



the rooks, and the bishops next the knights, while the king and queen stand on the center squares. The pawns of each set are alike, and any one may be placed in front of any piece.

The object of each player is to move so as to force his opponent's king into a position from which he cannot escape. (See *checkmate*.) The game

is opened by the player with the white men moving one of his men from the square on which it stands to some other square. The manner in which the various pieces may be moved, and the limitations and rules governing the moves, are stated below. Only the possible moves of each piece if unrestricted, can be pointed out, since the presence of other men on the board materially limits the moving power of the different pieces.



(Fig. 2)

## THE MOVES

*The King.* The king's moves are restricted more than those of

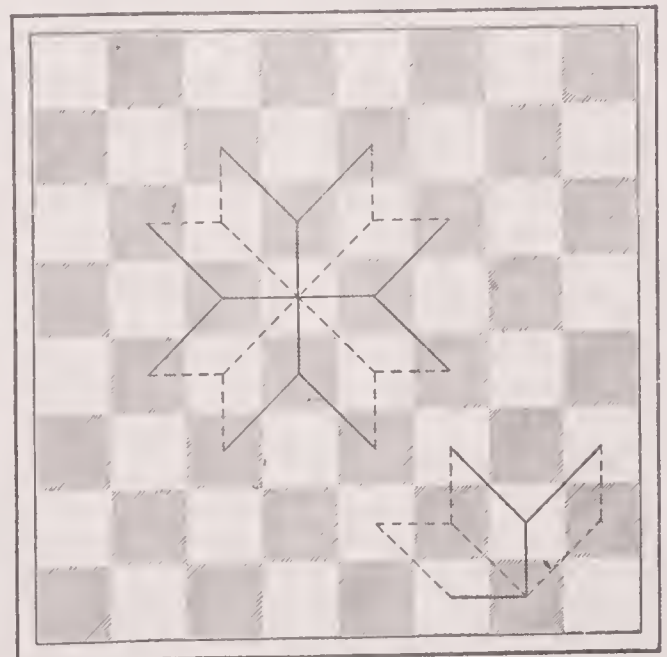
any other piece on the board. He may move only one square at a time, but he is not limited as to direction. Under certain conditions he is permitted to move two squares, which is called "castling," and will be explained under that head.

*The Queen.* The Queen is the most powerful piece in Chess. She may be moved any number of squares, in any direction, either straight or diagonally.

*The Rook, or Castle,* is next in value to the queen. He may move any number of squares on the files or on the ranks, backward, forward or sidewise.

*The Bishop* ranks next to the rook, and may move *diagonally* any number of squares.

*The Knight* is of nearly the same value as the bishop. Near the end of the game, however, two bishops will be found of greater value than two knights. Two knights alone cannot effect checkmate, whereas two bishops can. The knight's move is made up of two steps—one straight forward and one diagonal, either of which may be taken first. The accompanying diagram explains clearly this peculiar move. (Fig. 3.)



(Fig. 3)



KNIGHT'S MOVE

HERE it is shown that if a knight starts from a white square he must rest on a black one, and *vice versa*. The knight is the only piece that can "jump over" other pieces.

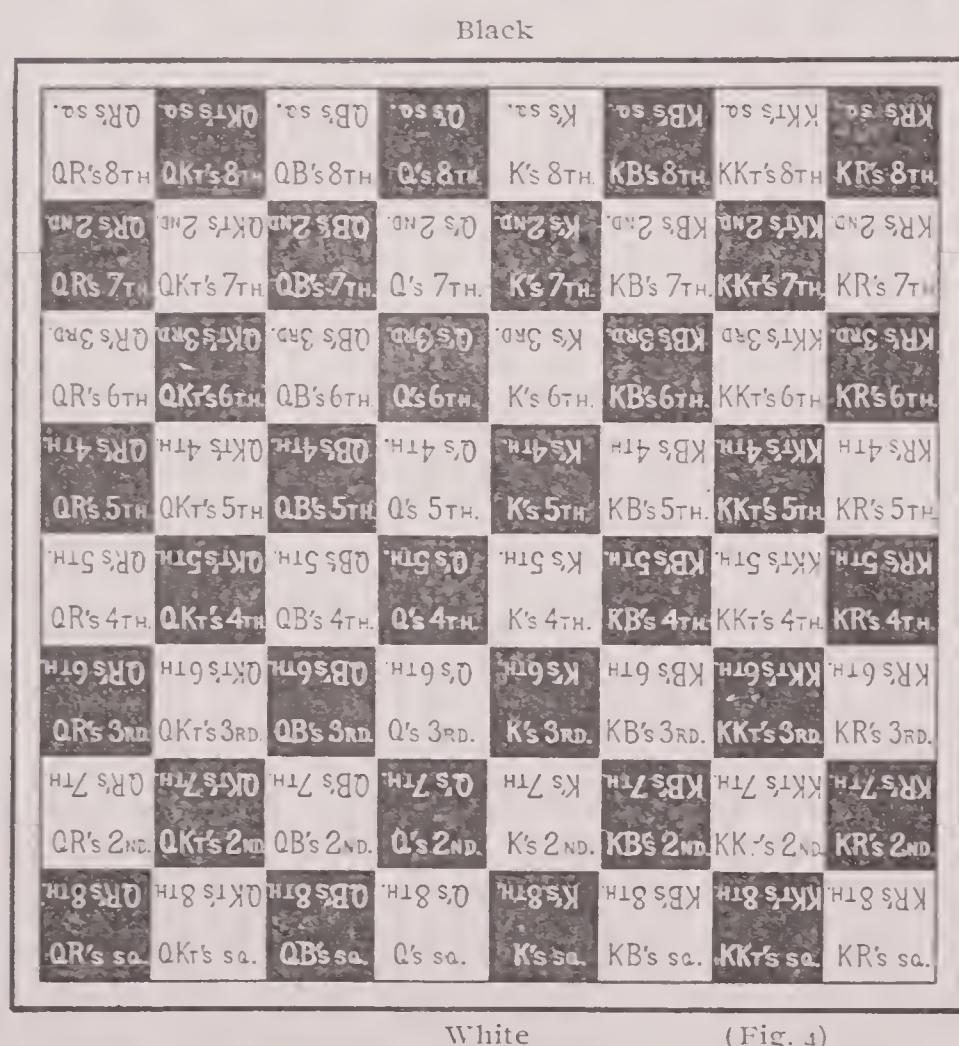
A *Pawn* may be moved *one square forward* at a time, except on the first move, when he may be moved either one square or two. When "capturing" a piece, a pawn must move *diagonally* and rest on the square of the piece captured, which is first removed. The pawn is the only man that does not capture in the direction of the move.

The pieces can be played backward or forward, to the right or to the left, but the pawns may only go forward. Should a pawn advance to the royal line of the adversary he may be promoted to the rank of any of the pieces except the king.

CHESS NOTATION

THE system of notation used in published games and problems is shown in Figure 4. It will be seen that the moves are reckoned from both ends of the board.

The squares are named after the pieces placed upon the board, as shown in Diagram 2. Thus, the square upon which the king stands at the



beginning of a game is called the king's square; the square in front of the king is called the king's second square; and so on to the king's eighth square.

The pieces to the right of the white king are called, respectively, the king's bishop, king's knight and king's rook; those to the left of the white queen are called, respectively, the queen's bishop, queen's knight and queen's rook. The men of the black set do not hold the same relative positions as those of the white. The pieces

to the left of the black king are the king's pieces; those to the right of the black queen are the queen's pieces.

The pawns take their names from the pieces in front of which they stand. Thus, the king's pawn is the pawn placed directly in front of the

king at the beginning of the game; the king's bisbop's pawn is the pawn placed directly in front of the king's bishop, and so on.

ABBREVIATIONS

THE abbreviations used in Chess publications to designate the pieces and pawns are as follows:—

K.....	King	QR.....	Queen's Rook
Q.....	Queen	P.....	Pawn
B.....	Bishop	KP.....	King's Pawn
Kt.....	Knight	QP.....	Queen's Pawn
R.....	Rook	KBP.....	King's Bishop's Pawn
KB.....	King's Bishop	KKtP.....	King's Knight's Pawn
KKt.....	King's Knight	KRP.....	King's Rook's Pawn
KR.....	King's Rook	QBP.....	Queen's Bishop's Pawn
QB.....	Queen's Bishop	QKtP.....	Queen's Knight's Pawn
QKt.....	Queen's Knight	QRP.....	Queen's Rook's Pawn

TECHNICAL TERMS IN CHESSE

*The Move.* The player opening the game is said to have “the move.”

*Taking, or Capturing,* is effected by removing the adverse piece from the board, and placing the attacking piece on the square previously occupied by the captured piece.

*Check and Checkmate.* It is a principle of Chess that the king cannot be captured. When he is directly attacked by any piece or pawn he is said to be “in check,” and the player so attacking must give warning by calling “check.” The attacked king must then (a) move “out of check”; (b) take the checking piece or pawn; or (c) interpose a man. Should he be unable to do any of these things he is said to be “checkmated,” and the game is lost to the player whose king is checkmated.

*Discovered Check* occurs when a player moves a piece or pawn from before the opponent's king and thereby opens or “discovers” check.

*Double Check* occurs when a king is attacked by two men at the same time.

*Perpetual Check* occurs when a king has no escape from one check without rendering himself liable to another. This differs from a checkmate in that the king may still move, though subject to repeated checks from the adversary. When this is the case, the player whose king is in *perpetual check* has the privilege of demanding that checkmate shall be given in a certain number of moves, in default of which the game may be declared a *draw*.

*Stalemate* occurs when a king, although not in check, is so placed that he cannot be moved without going into check, and when no other piece or pawn can be moved. The game is then “drawn.”

*Smothered Mate* occurs when a king is so hemmed in by his own men that he cannot escape the attack of an opposing knight. This loses the game to the player of the smothered king.



*En Prise.* A piece attacked by another piece is said to be *en prise*.

*Drawn Game.* A drawn game may arise from several causes: (1) from *perpetual check*; (2) from *stalemate*; (3) from neither player having sufficient force to check his opponent's king; or (4) from unskilful use of a sufficiently strong force. If the attacking party cannot effect checkmate in *fifty moves* after the first check is called, the game is drawn.

*Castling* is accomplished by moving the king and one of the rooks at the same time. This is the only double move in the game. To *castle*, a player must bring either rook to the side of the king, and the king must pass to the other side of the rook. In other words, the king is moved from his own square two squares to the right or left, while at the same time the rook toward which the king moves is brought to the square over which the king has just passed. A king cannot castle if he or the rook has been moved, or if another piece is between them, or when the king is in check.

*En Passant* (in passing). When, on the first move of a pawn, A, it is advanced two squares, if one of the adversary's pawns, B, is in such a position as to have taken A if it had been moved only one square, B may take A "*en passant*." Thus, in Figure 5, if one pawn is at B when the other is moved from A to A', B may move to B' and take A in passing.

*To Interpose.* If a king is placed in check, and it is possible to move another man between the attacking piece and the attacked king, the player defending is said to *interpose*. The term may also be used when covering an opponent's attack on any piece.

*Doubled Pawn.* When two pawns are on the same file the front one is called a *doubled pawn*.

*Isolated Pawn.* When a pawn stands alone, unprotected by other pawn or piece, it is termed an *isolated pawn*.

*Passed Pawn.* When a pawn is so far advanced that none of the adversary's men can oppose it, it is said to be a *passed pawn*.

*Queening a Pawn.* A pawn advanced to the eighth square of a file may then become a queen, or any other piece except a king.

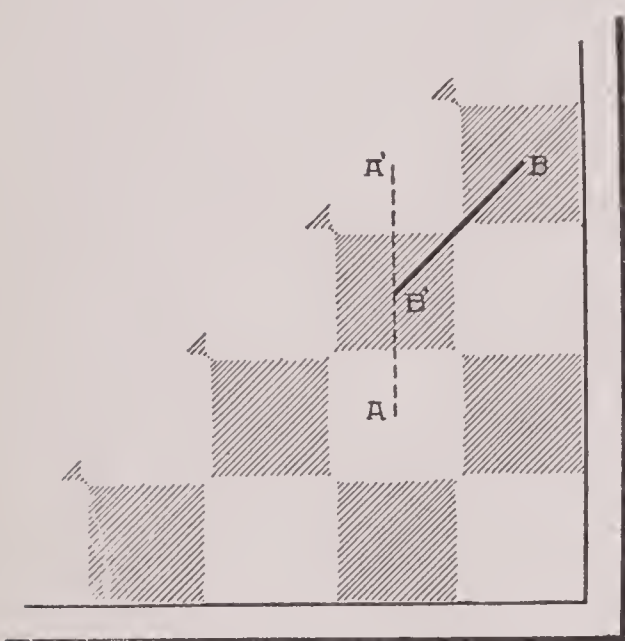
*Winning the Exchange.* When a player captures a superior piece in exchange for an inferior one, he is said to *win the exchange*.

*Minor Pieces.* The knights and bishops are called *minor pieces*.

*Forced Move* occurs when a player can make but one move.

*Gambit.* This word is from an Italian wrestling phrase, and means to *trip up*. In Chess it is an opening in which a pawn or piece is placed in a position to be captured, with the object of obtaining an advantageous attack. A gambit is "accepted" or "declined" at the discretion of the opponent. The pawn sacrificed is called the *gambit-pawn*.

*J'adoube.* Two French words meaning "I adjust," used by a player when he touches a piece or pawn without the intention of playing it.



(Fig. 5)

## LAWS OF CHESS

THE following laws were in force in most of the prominent tournaments held throughout Europe, and have been adopted in all of the principal Chess clubs in this country:—

## I—THE CHESSBOARD

THE board must be so placed during play that each player has a white square in his right-hand corner. If, during the progress of a game, either player discovers that the board has been improperly placed, he may insist on its being adjusted.

## II—THE CHESSMEN

If, at any time in the course of the game, it is found that the men were not properly placed, or that one or more of them were omitted at the beginning, the game in question must be annulled. If, at any time, it is discovered that a man has been dropped off the board, and moves have been made during its absence, such moves shall be retracted, and the man shall be restored. If the players cannot agree as to the square on which it should be replaced, the game must be annulled.

## III—RIGHT OF MOVE AND CHOICE OF COLOR

The right of making the first move, and (if either player require it) of choosing the color, which shall be retained throughout the sitting, must be decided by lot. In any series of games between the same players at one sitting, they shall have the first move alternately in all the games, whether won or drawn. In case of an annulled game, the player who had the first move in that game shall move first in the next.

## IV—BEGINNING OUT OF TURN

If a player make the first move in a game when it is not his turn to do so, the game must be annulled, if the error has been noticed before both players have completed the fourth move. After four moves on each side have been made, the game must be played out as it stands.

## V—MAKING TWO MOVES IN SUCCESSION

If, in the course of a game, a player move a man when it is not his turn to play, he must retract said move; and after his adversary has moved, must play the man wrongly moved, if it can be played legally.

## VI—TOUCH AND MOVE

A player must never touch any of the men except when it is his turn to play, or except when he touches a man for the purpose of adjusting it; in the latter case he must, before touching it, say "I adjust," or words to that effect. A player who touches with his hand (except accidentally) one of his own men when it is his turn to play, must move it, if it can be legally moved, unless before touching it, he say, "I adjust," as above; and a player who touches one of his adversary's men under the same conditions, must take it, if he can legally do so. If, in either case, the move cannot be legally made, the offender must move his king; but in the event of the king having no legal move there shall be no penalty. If a player hold a man in



his hand, undecided on which square to play it, his adversary may require him to replace it until he has decided on its destination; that man, however, must be moved. If a player, when it is his turn to play, touch with his hand (except accidentally or in castling) more than one of his own men, he must play any one of them legally movable that his adversary selects. If, under the same circumstances, he touch two or more of the adversary's men, he must capture whichever of them his antagonist chooses, provided it can be legally taken. If it happen that none of the men so touched can be moved or captured, the offender must move his king; but if the king cannot be legally moved, there shall be no penalty.

#### VII—FALSE MOVES AND ILLEGAL MOVES

If a player make a false move, that is, either by playing a man of his own to a square to which it cannot be legally moved, or by capturing an adverse man by a move which cannot be legally made, he must, at the choice of his opponent, and according to the case, either move his own man legally, capture the man legally or move any other men legally movable. If, in the course of a game, an illegality be discovered (not involving a king being in check), and the move on which it was committed has been replied to, and not more than four moves on each side have been made subsequently, all these last moves, including that on which the illegality was committed must be retracted. If more than four moves on each side have been made, the game must be played out as it stands.

#### VIII—CHECK

A player must audibly say "Check!" when he makes a move which puts the hostile king in check. The mere announcement of check shall have no signification if check be not actually given. If check be given, but not announced, and the adversary make a move which obviates the check, the move must stand. If check be given and announced, and the adversary neglects to obviate it, he shall not have the option of capturing the checking piece or pawn, or of covering, but must move his king out of check; but if the king have no legal move, there shall be no penalty. If, in the course of a game, it be discovered that a king has been left in check for one or more moves on either side, all the moves subsequent to that on which the check was given must be retracted. Should these not be remembered, the game must be annulled.

#### IX—ENFORCING PENALTIES

A player is not bound to enforce a penalty. A penalty can be enforced by a player only before he has touched a man in reply. Should he touch a man in reply in consequence of a false or illegal move of his opponent, or a false cry of check, he shall not be compelled to move that man, and his right to enforce the penalty shall remain. When the king is moved as a penalty, it cannot castle on that move.

#### X—CASTLING

In castling, the player shall move king and rook simultaneously, or shall touch the king first. If he touch the rook first, he must not quit it before having touched the king, or his opponent may claim the move of the rook as a complete move. When the odds of either rook or both rooks are given, the player giving the odds shall be allowed to move his king as in castling, and as though the rooks were on the board.

### XI—COUNTING FIFTY MOVES

A player may call upon his opponent to draw the game, or to mate him within fifty moves on each side, whenever his opponent persists in repeating a particular check, or series of checks, or the same line of play, or whenever he has a king alone on the board, or

king and queen,	}	against an equal or superior force;
king and rook,		
king and bishop,		
king and knight,		

king and two bishops,	}	against king and queen; and in all analogous cases;
king and two knights,		
king, bishop and knight,		

and whenever one player considers that his opponent can force the game, or that neither side can win it, he has the right of submitting the case to the umpire or bystanders, who shall decide whether it is one for the fifty move counting; should he not be mated within the fifty moves; he may claim that the game shall proceed. For example: A has a king and queen against B's king and rook. B claims to count fifty moves. At the forty-ninth move, A, by a blunder, loses his queen. B can claim that the game proceed, and A, in his turn, may claim the fifty move counting.

### XII—PAWN-TAKING IN PASSING

Should a player be left with no other move than to take a pawn in passing, he shall be bound to play that move.

### XIII—QUEENING A PAWN

When a pawn has reached the eighth square, the player has the option of selecting a piece, except a king, whether such piece has been previously lost or not, the name and powers of which the pawn shall then assume, or of deciding that it shall remain a pawn.

### XIV—ABANDONING THE GAME

If a player abandon the game, discontinue his moves, voluntarily resign, wilfully upset the board, or refuse to abide by these laws, or to submit to the decision of the umpire, he must be considered to have lost the game.

### XV—THE UMPIRE AND BYSTANDERS

The umpire shall have authority to decide any question whatever that may arise in the course of a game, but must never interfere except when appealed to. He must always apply the laws as herein expressed, and neither assume the power of modifying them, nor of deviating from them in particular cases, according to his own judgment. When a question is submitted to the umpire, or to bystanders, by both players, their decision shall be final and binding upon both players. The term "bystander" shall comprise any impartial player of eminence who can be appealed to, whether absent or present.

### HINTS TO BEGINNERS

ACCUSTOM yourself to play with either color. Always play strictly according to the laws of the game.

Be willing to accept odds of a superior player.



Watch your adversary's move, and discover as far as possible his reason for making it.

Decide what move you wish to make before touching the piece to be moved.

Do not advance pieces too rapidly—they are apt to be forced back by opponent's pawns and time would thus be lost.

Do not begin an attack too early in the game, but when once begun do not be diverted from your object unless absolutely necessary for the safety of your men.

Do not give check uselessly.

Protect your pawns; toward the end of a game a pawn is often as valuable as a piece.

When possible, make your rooks support each other. A rook is most effective toward the end of the game, when the board is comparatively clear.

Learn as many openings as possible. To restrict your game to one opening would be poor playing.

Avoid placing your queen before your king in such a way that the opposing party may attack the former piece, and thus the latter, by bringing forward a rook or a bishop. A queen is often lost in this manner.

Following are some of the openings which should be learned:—

#### *Philidor's Defense*

WHITE	BLACK
1. P to K <sub>4</sub>	1. P to K <sub>4</sub>
2. Kt to KB <sub>3</sub>	2. P to Q <sub>3</sub>

#### *The Giuoco Piano*

WHITE	BLACK
1. P to K <sub>4</sub>	1. P to K <sub>4</sub>
2. Kt to KB <sub>3</sub>	2. Kt to QB <sub>3</sub>
3. B to QB <sub>4</sub>	3. B to QB <sub>4</sub>

#### *The Counter Gambit in the King's Knight's Opening*

WHITE	BLACK
1. P to K <sub>4</sub>	1. P to K <sub>4</sub>
2. Kt to KB <sub>3</sub>	2. P to KB <sub>3</sub>

#### *Petroff's Defense*

WHITE	BLACK
1. P to K <sub>4</sub>	1. P to K <sub>4</sub>
2. Kt to KB <sub>3</sub>	2. Kt to KB <sub>3</sub>
3. Kt takes KP (not necessarily)	

#### *The Two Knights' Defense*

WHITE	BLACK
1. P to K <sub>4</sub>	1. P to K <sub>4</sub>
2. Kt to KB <sub>3</sub>	2. Kt to QB <sub>3</sub>
3. B to QB <sub>4</sub>	3. Kt to KB <sub>3</sub>

*The Scotch Gambit*

- WHITE
1. P to K<sub>4</sub>
  2. Kt to KB<sub>3</sub>
  3. P to Q<sub>4</sub>

- BLACK
1. P to K<sub>4</sub>
  2. Kt to QB<sub>3</sub>

*The Knight's Game of Ruy Lopez*

- WHITE
1. P to K<sub>4</sub>
  2. Kt to KB<sub>3</sub>
  3. B to QKt<sub>5</sub>

- BLACK
1. P to K<sub>4</sub>
  2. Kt to QB<sub>3</sub>

*Queen's Bishop's Pawn's Opening*

- WHITE
1. P to K<sub>4</sub>
  2. P to QB<sub>3</sub>
  3. P to Q<sub>4</sub>
  4. QP takes P

- BLACK
1. P to K<sub>4</sub>
  2. KKt to B<sub>3</sub>
  3. Kt takes P

*The Evans Gambit*

- WHITE
1. P to K<sub>4</sub>
  2. Kt to KB<sub>3</sub>
  3. B to QB<sub>4</sub>
  4. P to QKt<sub>4</sub>

- BLACK
1. P to K<sub>4</sub>
  2. Kt to QB<sub>3</sub>
  3. B to QB<sub>4</sub>
  4. B takes QKtP

*The Allgaier Gambit*

- WHITE
1. P to K<sub>4</sub>
  2. P to KB<sub>4</sub>
  3. Kt to KB<sub>3</sub>
  4. P to KR<sub>4</sub>
  5. Kt to Kt<sub>5</sub>

- BLACK
1. P to K<sub>4</sub>
  2. P takes P
  3. P to KKt<sub>4</sub>
  4. P to KKt<sub>5</sub> (best)

*The King's Gambit Proper, or King's Knight's Gambit*

- WHITE
1. P to K<sub>4</sub>
  2. P to KB<sub>4</sub>
  3. Kt to KB<sub>3</sub>

- BLACK
1. P to K<sub>4</sub>
  2. P takes P
  3. P to KKt<sub>4</sub> (best)

*The Muzio Gambit*

- WHITE
1. P to K<sub>4</sub>
  2. P to KB<sub>4</sub>
  3. Kt to KB<sub>3</sub>
  4. B to QB<sub>4</sub>
  5. Castles

- BLACK
1. P to K<sub>4</sub>
  2. P takes P
  3. P to KKt<sub>4</sub>
  4. P to KKt<sub>5</sub>

*The King's Rook's Pawn's Gambit*

- WHITE
1. P to K<sub>4</sub>
  2. P to KB<sub>4</sub>
  3. P to KR<sub>4</sub>

- BLACK
1. P to K<sub>4</sub>
  2. P takes P
  3. B to K<sub>2</sub>

*The King's Bishop's Gambit*

- WHITE
1. P to K<sub>4</sub>
  2. P to KB<sub>4</sub>
  3. B to QB<sub>4</sub>

- BLACK
1. P to K<sub>4</sub>
  2. P takes Pawn
  3. P to Q<sub>4</sub>



*The Sicilian Game*

- WHITE
1. P to K<sub>4</sub>
  2. P to Q<sub>4</sub>

- BLACK
1. P to QB<sub>4</sub>

*The Game of the Two Bishops*

- WHITE
1. P to K<sub>4</sub>
  2. B to QB<sub>4</sub>

- BLACK
1. P to K<sub>4</sub>
  2. B to QB<sub>4</sub>

*The King's Bishop's Opening*

- WHITE
1. P to K<sub>4</sub>
  2. B to QB<sub>4</sub>
  3. Kt to QB<sub>3</sub>

- BLACK
1. P to K<sub>4</sub>
  2. Kt to KB<sub>3</sub> (best)

*The Fianchetto*

- WHITE
1. P to K<sub>4</sub>
  2. P to Q<sub>4</sub>
  3. B to Q<sub>3</sub>
  4. P to QB<sub>4</sub>

- BLACK
1. P to Q<sub>3</sub>
  2. B to QKt<sub>2</sub>
  3. P to K<sub>3</sub>

or

1. P to K<sub>4</sub>
2. P to KKt<sub>3</sub>
3. Kt to QB<sub>3</sub>

1. P to Q<sub>3</sub>
2. P to K<sub>3</sub>
3. B to QKt<sub>2</sub>

## DRAUGHTS OR CHECKERS

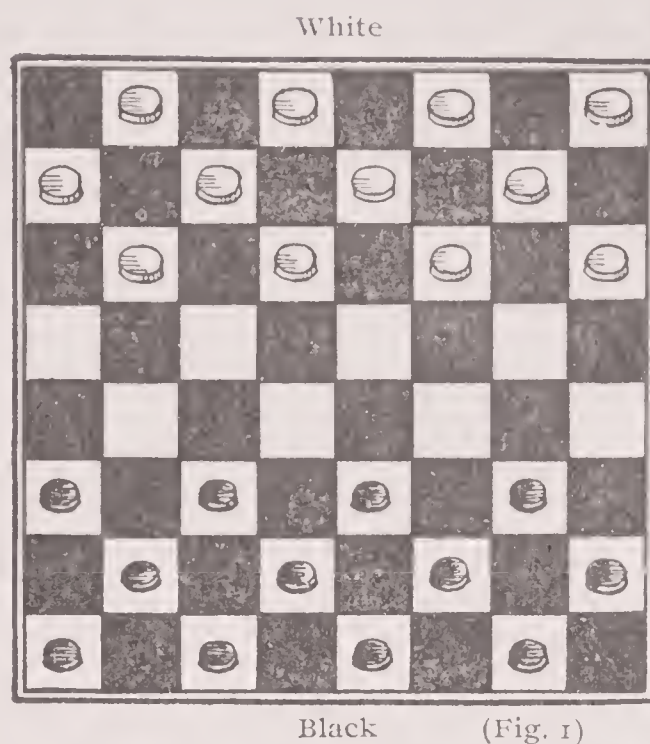
MANY of the attractive and commendable features of chess may be found in the simpler and less scientific game of Draughts or Checkers. Without entering into a discussion of the relative merits of these games, it will suffice to say that one who desires that his pleasures shall come easily, will usually prefer the simpler of the two.



## THE BOARD AND MEN

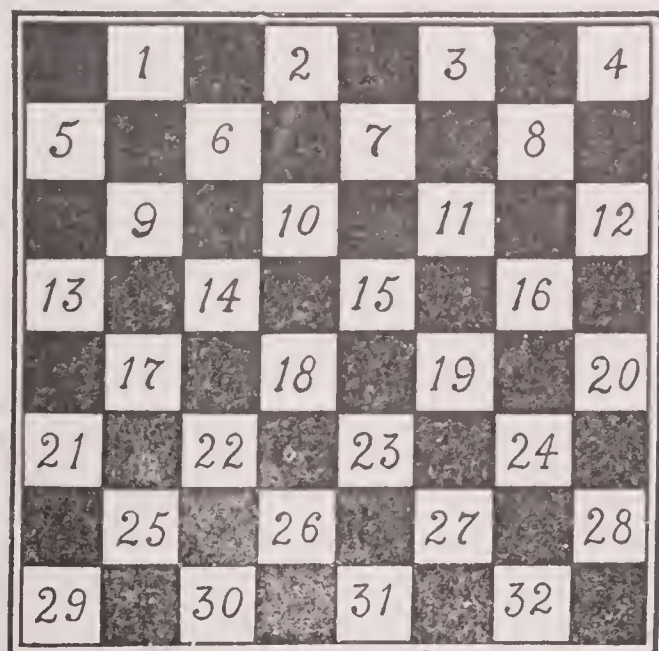
The game of Checkers is played on the same kind of board that is used in chess, which is divided into sixty-four equal squares, colored alternately black and white. Red is often used in place of black and is opposed to white. But, unlike chess, the pieces are placed on squares of the same color, either all black, or all white, and are moved only to squares of that color. There are twenty-four pieces, or "men," twelve of which are white, while the others are black. They are all of the same size and are disk-shaped, each having a flat top and bottom, circular in form.

The game is played by two persons, who sit at opposite sides of the board, and each has twelve pieces of the same color, which are arranged as shown in Figure 1. The pieces may all be placed either on the dark-colored squares or on the white, but the board must be arranged so that there shall not be a piece on the right-hand corner square of either player, or, in other words, so that each shall have a *double corner* to the right. This will be better understood by reference to Figure 1, in which one player is supposed to sit at the side of the board marked White, while the other sits at that marked Black. The more common practice in this country is to arrange the men on the white squares, and, with a view to clearness in describing the game, this arrangement will be followed throughout. The squares are numbered as shown in Figure 2.



### THE MOVES

IN BEGINNING the first game, it is decided by lot which of the players is to have the black men, and in the other games of a series they take the white and the black men alternately. The player having the black men always has the first move. The moves are made diagonally, one square at a time, and there may be only one man on a square, thus the



man on square 23 may move to either 18 or 19; the one on 24 may move to either 19 or 20. The men must move forward, that is, toward the side of the board opposite their first position, until after they have reached one of the squares in the adversary's first or *king* row. They are then *crowned* by having a second man placed above the first, and become *kings*, after which they may move either forward or backward as desired.

When two opposing men are on adjoining squares, and there is a vacant square behind the man having the second move, the one having the first move may "jump" to the vacant square, thereby "taking" the other man, which is then removed from the board. In the same way two or more men may be "taken" in one move, if there are alternate vacant squares between them. Thus, in Figure 2, if there be white men on squares 22, 15, and 8, squares 18, 11, and 4 be vacant, and there be a black



man at 25, whose move it is, the latter may jump first to 18, then to 11, then to 4, at one move, and thus capture the three white men. Since a king may move either forward or backward, he can take men in either direction, but, like the other men, he can move only one square at a time, unless he jumps an opponent. He may be taken by one of the opposing men in the same manner as an uncrowned piece.

A piece which is in a position such that it may be taken by one of the opposing pieces at the next move is said to be *en prise*. The players move alternately, the object of each being to take all his opponent's pieces, or to *block* the latter so that they cannot move. The player who has all of his pieces taken or blocked loses the game, and if neither can obtain an advantage that will enable him to win, the game is *drawn*.

When one player appears to have an advantage of the other, in either force or position, he may be required to win in forty of his own moves, and if he fails to do so the game is drawn.

If a player moves in such a way as not to take one of his opponent's men when in a position to do so, the latter has the option (a) of allowing the move to stand; (b) of requiring that the man moved be replaced, and that the man *en prise* be taken; or (c) of *huffing*, which means that the move is allowed to stand, and the man which could have captured is taken from the board as a penalty for not capturing.

In addition to huffing, the player makes his move, but the huff must be made before the move or the former is lost. If the adversary of the player who failed to capture allows the move to stand without huffing, and the latter moves again without taking the man *en prise*, the former has the same option as before. If a player can take one man by either of two moves, or one man by one move and more than one by another, he may elect which move he will make. But whichever move he decides upon, he must take every man that is *en prise* for that move. Should he neglect to do this he may be either huffed, or compelled to take the pieces omitted.

It is better, as a rule, to keep the men in wedge form near the center of the board, and to move toward the center rather than toward the sides. A man situated in one of the side columns is handicapped by having only one possible move, while a man in one of the three center columns may move diagonally to the right or to the left.

It is advisable to get a king as early in the game as possible, and to keep him well protected, or *guarded*, since he is much more valuable than an ordinary man. A player should not make too many unnecessary exchanges, that is, moves which enable him to capture one of his opponent's men but at the same time put one of his own men *en prise*. If a player has the advantage in number of men, he should make as many exchanges as possible, since his relative advantage is thus increased, but if he has fewer men, or if he would sacrifice position by an exchange, he should try to avoid making it.

To *have the move* means to be in such a position as to be able to secure the last move. This is generally an advantage, but it is sometimes the

reverse. At the beginning of the game the second player has the move, but it is of no advantage to him at that time. To ascertain which player has the move at any time, add together all the pieces on the alternate columns, beginning at either side. If their sum is odd, the next player has the move, while if even the second player has it. An exchange causes the move to be transferred to the other player, hence the one who has it should avoid exchanging, unless he does so twice in succession so that he is enabled to keep the move.

### THE LOSING GAME

IN THE Losing Game, or "Give-Away," as it is sometimes called, the object of each player is to force his adversary to take as many pieces as possible, and the player who first gets rid of all his pieces wins the game. This style of play is not considered scientific, but it requires a considerable amount of foresight and good judgment. It is desirable to force your antagonist to acquire kings, and with this object in view your men should be well separated, and your back squares should be left open. The rules relating to huffing and the other points of play are applicable to this game.

### GLOSSARY OF TECHNICAL TERMS USED IN CHECKERS

*Pieces.* The twenty-four discs with which the game is played. They are shaped alike, but twelve are colored white and twelve black.

*Squares.* The sixty-four square spaces into which the checkerboard is divided. They are colored alternately white and black.

*Move.* To *move*, or *make a move*, is to push a piece diagonally from one square to an adjoining square of the same color.

*King Row.* The row of squares nearest each player is called his *king row*.

*King.* When a piece, or man, belonging to either player is moved or jumped to the opponent's king row he becomes a *king*.

*Crown.* When a piece becomes a king it is *crowned* by the opponent, who places on it another piece of the same color.

*Jumping.* When two opposing pieces are on adjacent squares, and piece B of the player having the second move is situated on a square to which piece A of the first player could move, if it were unoccupied, while the square behind B in the line of the two pieces is vacant, A may "jump" B and rest on the vacant square.

*Taking, or Capturing.* When a piece is jumped, it is said to be *taken*, or *captured*, and is removed from the board.

*Unguarded.* A piece having a vacant square behind it is said to be *unguarded*.

*En Prise.* A piece which is in such a position that it may be captured at the next move is said to be *en prise*.



*Exchange.* When in two successive moves each player captures one of his opponent's men, an *exchange* is said to have taken place.

*Cornered.* When a piece is in such position that, though able to move, it cannot do so without being captured at the next play, it is *cornered*.

*Double Corner.* This is a term used to designate the two playing-squares in the right-hand corner of each player.

*Breeches.* When a king is moved into a vacant square between two opposing pieces, each of which is unguarded, so that whichever one is moved the other must be sacrificed, the king is said to be "in breeches."

*Huffing.* This is one of three options given a player if his opponent neglects to capture when able. If the player elects to huff, the last move of the opponent stands good, and the man that could have captured is removed from the board as a penalty for not taking.

*Standing the Huff.* A player who does not take a piece, although he sees that it is *en prise*, is said to "stand the huff."

*Draw.* If neither player is able to win, the game is declared a *draw*.

*Odds of the Draw.* If, at the beginning of a game, one player agrees to forfeit it to his opponent in case of a draw, he is said to give the latter the *odds of the draw*.

*The Move.* To "have the move" means to occupy such a position as to be able to secure the last move.

*J'adoube.* This is a French term meaning "I adjust," which is used by a player when he touches a piece to give notice that he does not intend to play it.

#### LAWS OF THE GAME OF DRAUGHTS OR CHECKERS

1. The choice of men for the first game is determined by lot, and in a series of games the players take the white and the black men alternately.

2. In each game the player having the black men has the first move, whether the previous game was won or drawn.

3. If a player whose turn it is to play touches a piece, he must move it, unless he has previously given notice of his intention to adjust it. If he touches a piece that cannot be moved, there is no penalty.

4. If a piece is moved over an angle of the square on which it is stationed, the move must be completed in that direction.

5. A move or a capture is completed as soon as the player's hand is withdrawn from the piece moved to another square.

6. When a man becomes a king his move is finished—that is, if there is a piece *en prise* of the newly-made king, he cannot capture it by a continuation of the move which carried him into the king row, but must wait until after the adversary has made his next move.

7. If a player makes a false move, or one that is not allowed by the foregoing rules, the adversary may require the pieces so moved to make a proper move in whichever direction he pleases. If there is no legal move for the piece, there is no penalty except the option of allowing the false move to stand.

8. If a player captures one of his own pieces, the adversary may have it removed at his option.

9. If more than one piece be captured at one move, and the player removes his hand from the capturing piece before all of the pieces *en prise* have been taken, the move is completed, and the player is liable to the provisions of Law 11.

10. When a player moves a man to king, the adversary must crown that man.

11. If a player, when moving, neglects to capture a man or men *en prise*, the adversary has the option (a) of allowing the move to stand; (b) of requiring that the piece moved be replaced and that the capture be made; or (c) of huffing the piece that could have been captured.

12. If a player entitled to huff touches that one of his adversary's pieces which failed to capture, he must huff. He is required to huff before moving, and if he fails to do so he cannot huff afterward; but if the adversary neglects to capture, the player again has the option of Law 11.

13. A player who has the advantage in force may be required to win in forty of his own moves (that is, forty by each player), computed from the move in which notice is given. If he fails to win in forty moves the game is drawn.

14. In a similar manner, a player who has two kings, while his opponent has only one, may be required to win in twenty moves.

15. When the *odds of the draw* is given, the player giving them must not occasion unnecessary delay by uselessly repeating the same maneuvers. When the average of the players' forces and positions becomes nearly equal, the player who has given the odds of the draw may be required to win the game in twenty of his own moves, or lose it through its being declared drawn.

16. Each player may be required to move within a specified time, which must be agreed on before play commences. A player who does not move within that time loses the game.

## HINTS TO BEGINNERS

MOVE toward the center of the board whenever possible, and try to avoid moving a man to a side square.

Push toward your opponent's king row as soon as opportunity offers, and keep your own king row protected.

Think well before each move, and always have in mind the probable future moves of both yourself and your antagonist.

Give your whole attention to the game, and be careful to do nothing to distract your adversary's attention.

Never indulge in disputes over points in the game, and never be a disagreeable loser.

Whenever possible, play with those who are more expert than yourself, and thus be a learner, rather than a teacher.

## EXERCISES

FOLLOWING are the moves for a few games, which will assist the beginner in learning some of the simpler methods of play. The long columns of figures, necessary to show each of the different moves, may appear formidable to a young player, but after a little practice with a board and men, no difficulty will be found in following



the details of the game. Black, of course, has the first move, and the moves of each color are numbered in their order. The abbreviations used are *t*, which indicates that a man is taken, and *k*, that a man becomes a king.

## GAME I

BLACK	WHITE
1. 11 to 15	1. 22 to 18
2. 15 " 22 (t)	2. 25 " 18 (t)
3. 8 " 11	3. 29 " 25
4. 4 " 8	4. 25 " 22
5. 12 " 16	5. 24 " 20
6. 10 " 15	6. 27 " 24
7. 16 " 19	7. 23 " 16 (t)
8. 15 " 19	8. 24 " 15 (t)
9. 9 " 14	9. 18 " 9 (t)
10. 11 " 25 (t 2)	10. 32 " 27
11. 5 " 14 (t)	11. 27 " 23
12. 6 " 10	12. 16 " 12
13. 8 " 11	13. 28 " 24
14. 25 " 29 (k)	14. 30 " 25
15. 29 " 22 (t)	15. 26 " 17 (t)
16. 11 " 15	16. 20 " 16
17. 15 " 18	17. 24 " 20
18. 18 " 27	18. 31 " 24 (t)
19. 14 " 18	19. 16 " 11
20. 7 " 16 (t)	20. 20 " 11 (t)
21. 18 " 23	21. 11 " 8
22. 23 " 27	22. 8 " 4 (k)
23. 27 " 31 (k)	23. 4 " 8
24. 31 " 27	24. 24 " 20
25. 27 " 23	25. 8 " 11
26. 23 " 18	26. 11 " 8
27. 18 " 15	etc.

Black wins, for though there are now a king and four men of each color, the black pieces are in much the more advantageous position.

## GAME II

BLACK	WHITE
1. 11 to 15	1. 22 to 18
2. 15 " 22 (t)	2. 25 " 18 (t)
3. 8 " 11	3. 29 " 25
4. 4 " 8	4. 25 " 22
5. 12 " 16	5. 24 " 20
6. 10 " 15	6. 21 " 17
7. 7 " 10	7. 27 " 24
8. 8 " 12	8. 17 " 13
9. 9 " 14	9. 18 " 9 (t)
10. 5 " 14	10. 24 " 19
11. 15 " 24 (t)	11. 28 " 19 (t)
12. 14 " 17	12. 32 " 27

13. 10 " 14  
 14. 3 " 7  
 15. 6 " 9  
 16. 1 " 10 (t)  
 17. 14 " 18  
 18. 16 " 30 (t 2 & k)  
 19. 10 " 17  
 20. 30 " 25  
 21. 11 " 15  
 22. 2 " 9 (t)  
 23. 15 " 18  
 24. 7 " 11  
 25. 10 " 14  
 26. 25 " 21  
 27. 14 " 17

13. 27 " 24  
 14. 30 " 25  
 15. 13 " 6 (t)  
 16. 22 " 13 (t)  
 17. 23 " 14 (t)  
 18. 25 " 21  
 19. 21 " 14 (t)  
 20. 14 " 9  
 21. 9 " 6  
 22. 13 " 6 (t)  
 23. 6 " 2 (k)  
 24. 2 " 6  
 25. 6 " 9  
 26. 31 " 26

There are now a king and three men of each color, and the game results in a draw.

## GAME III

BLACK

1. 22 to 18  
 2. 24 " 20  
 3. 25 " 22 (t)  
 4. 29 " 25  
 5. 18 " 14  
 6. 22 " 8 (t)  
 7. 25 " 22  
 8. 23 " 18  
 9. 18 " 14  
 10. 27 " 24  
 11. 21 " 14 (t)  
 12. 30 " 25  
 13. 25 " 21  
 14. 22 " 15 (t)  
 15. 24 " 15 (t)  
 16. 26 " 17 (t)  
 17. 15 " 10  
 18. 31 " 26  
 19. 32 " 27  
 20. 28 " 3 (t k & 2, & k)

WHITE

1. 12 to 16  
 2. 8 " 13  
 3. 9 " 13  
 4. 5 " 9  
 5. 9 " 18 (t)  
 6. 4 " 11 (t)  
 7. 10 " 15  
 8. 16 " 19  
 9. 6 " 10  
 10. 10 " 17 (t)  
 11. 3 " 8  
 12. 1 " 6  
 13. 15 " 18  
 14. 11 " 18 (t)  
 15. 18 " 22  
 16. 13 " 22 (t)  
 17. 6 " 15 (t)  
 18. 22 " 31 (t & k)  
 19. 31 " 24

The only three men White now has left are badly situated, and as Black has a king to the good he wins the game easily.

## GAME IV

BLACK

1. 11 to 15  
 2. 9 " 13  
 3. 15 " 22 (t)  
 4. 10 " 14  
 5. 5 " 14 (t)  
 6. 8 " 11

WHITE

1. 23 to 19  
 2. 22 " 18  
 3. 25 " 18 (t)  
 4. 18 " 9 (t)  
 5. 27 " 23  
 6. 26 " 22




7.	6	"	10	7.	22	"	18
8.	1	"	5	8.	18	"	9 (t)
9.	5	"	14 (t)	9.	29	"	25
10.	11	"	15	10.	30	"	26
11.	4	"	8	11.	25	"	22
12.	8	"	11	12.	32	"	27
13.	2	"	6	13.	22	"	17
14.	13	"	22 (t)	14.	26	"	17 (t)
15.	3	"	8	15.	17	"	13
16.	15	"	18	16.	24	"	20
17.	11	"	15	17.	13	"	9
18.	6	"	13 (t)	18.	20	"	16
19.	15	"	24 (t)	19.	27	"	20 (t)
20.	12	"	26 (t 2)	20.	31	"	6 (t 3)

There are now the same number of men of each color, but Black wins because the pieces of that color are better situated than the others.

The foregoing games are subject to numerous variations, and simply serve to illustrate specific styles of play. Either by practicing alone or by playing with an opponent, the beginner may first follow one of these methods and then vary it in the different ways that will suggest themselves. By this means a clear insight into the principles of the game may soon be obtained, and several styles of play may be learned.

## DOMINOES



THE game of Dominoes is so old and so familiar to most of us, and appears so easy to play, that doubtless many of us consider it a trivial and old-fogyish form of amusement. But there is much more in the game than appears on the surface. It does not depend entirely upon chance, as beginners and those unacquainted with it often think, but offers opportunities for careful calculation and skillful play.

To be convinced of this, one has only to watch a game in which an ordinary player is opposed to a more skillful one. The difference in the two methods of play will at once be apparent, and the better score will often be found credited, not to the player who "has the better luck," but to the one who plays the better game.

An ordinary set of Dominoes consists of twenty-eight pieces, which are usually about three-eighths of an inch in thickness, one inch in width, and two inches in length. They are either made entirely of some black

material, or have black backs and white faces. The face is divided cross-wise into two equal parts by a groove, or a raised line, which is colored black on a white face and *vice versa*.

The faces are distinguished from each other by various numbers and combinations of circular dots or depressions, of the same color as the dividing line. These dots, or pips, range in number from one to twelve, and by distributing them in different ways in the two face spaces, twenty-eight different combinations are formed. Each piece is named from the number and arrangement of the pips on the face. The Domino which has six pips in each space, for example, is called the *double-six*, and in a similar manner the twenty-eight pieces are designated as follows:—

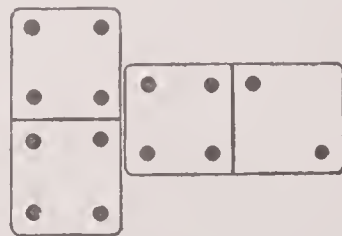
Double-six	Double-five	Four-trey	Trey-blank
Six-five	Five-four	Four-deuce	Double-deuce
Six-four	Five-trey	Four-ace	Deuce-ace
Six-trey	Five-deuce	Four-blank	Deuce-blank
Six-deuce	Five-ace	Double-trey	Double-ace
Six-ace	Five-blank	Trey-deuce	Ace-blank
Six-blank	Double-four	Trey-ace	Double-blank

### BLOCK GAME

THE simplest and most characteristic game of Dominoes is what is called the Block Game, from which most of the other games were developed. The pieces are all placed face downward on a table or other surface, and thoroughly mixed or “shuffled.” Each of the players, of whom there may be two, three or four, then selects seven of the pieces, which compose his “hand.” The faces of these must not be seen by the other players until they are played. The one who has the highest double has the “pose,” or first play, and places the double on the table, face upward. The play then proceeds in regular order to the left of the leader, and the “lead” for the succeeding “hands” rotates in a similar manner.

At the beginning of the game, the player who obtains the lead by reason of holding the highest double is required to play that piece, but the leads from the succeeding hands may be made with any piece held by the leader. If there is any doubt or dispute among the players as to whose turn it is to lead or to play, this may be determined by each drawing a piece, the highest piece drawn winning the lead or play.

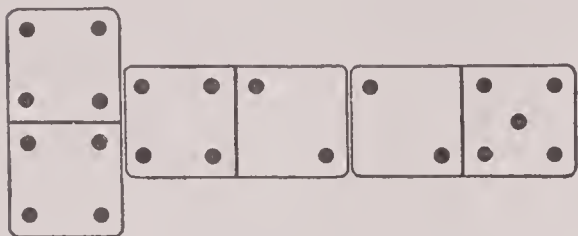
Each player plays one piece at a time, and one end of that piece must match the free end of one of the pieces already down. For example, let us suppose that the highest double held by either player at the beginning of a two-hand game is the double-four. The player holding that piece plays it, and the other player must then play one of the following pieces: six-four, five-four, four-trey, four-deuce, four-ace or four-blank. Whichever one he plays, as for example, the four-deuce, must be placed at one side of the double-four, as shown in the accompanying figure.



(Fig. 1)



The first player must now play either one of the pieces already named or some piece having two pips at one end, such as the five-deuce. This must be placed against that one of the first two pieces which it matches.



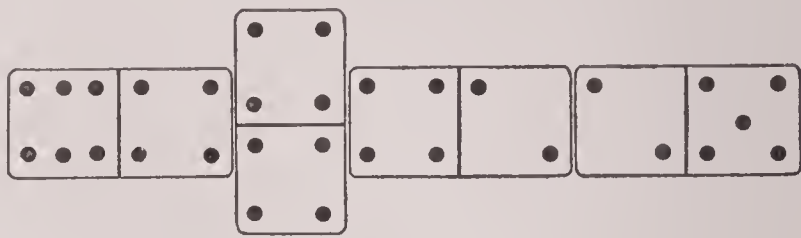
(Fig. 2)

In this instance it would be placed against the four-deuce. (Fig. 2.)

The other player must now play a piece having either four or five pips at one end. If, for example, he plays the four-six, he must place it as shown in Figure 3.

It will be seen from the foregoing that in playing a single piece to a double, the matching end of the former is placed against the side of the latter, while in playing one single piece on another, their matching ends are placed together.

If no player holds a double at the beginning of the game, the one having the highest-numbered piece leads. The one that gets rid of all his pieces first cries "Domino!" and his score for that hand is determined by counting the spots on the pieces held by the other player or players.



(Fig. 3)

In all games of Dominoes, one person usually keeps the scores of all the players. If at any time no one can play, the game is said to be "blocked." Each player then places his remaining pieces on the table, face upward, and the one whose left-over hand aggregates the least number of pips is given a score equal to the sum of the pips on the pieces still held by his opponents. Unless otherwise agreed, the score for the game is one hundred, though at the present time it is often set at fifty.

## DRAW GAME

THE Draw Game, which is often played by two or three persons, is really only a variation of the block game. The difference between the two is that in the former, whenever a player is unable to play he draws one piece at a time from the pack, until he finds a piece that will match. (The pack, or pool, consists of the pieces that remain after the players have all drawn their hands.) It would not be a violation of the rules for the player to continue to draw from the pack after he has obtained the piece wanted, but this is usually prohibited by agreement at the beginning of the game.

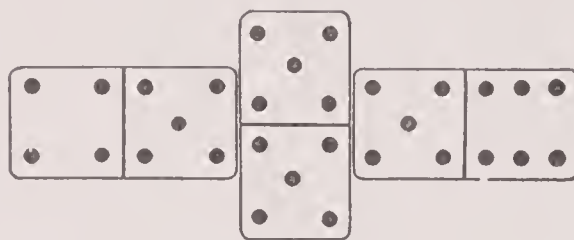
## MUGGINS OR FIVES

THIS is perhaps the most popular of the games played with Dominoes. Instead of seven pieces, five are drawn by each player, and the leads and plays are regulated as in the draw game. The distinctive characteristics of the game of Muggins, or Fives, is indicated by the latter name,—the score is reckoned in multiples of five. Thus, if the six-four or the double-

five be led, the player scores ten; if he leads the four-ace, the trey-deuce, or the five-blank he scores five.

Throughout the remainder of the game, if, when a player's turn comes, he can play a piece such that the sum of the pips on its free end and those on the free end of the other end-domino of the set is a multiple of five, that number is added to his score. If any player cannot play in his turn, he draws from the pool until he gets a piece that will match; but unlike the draw game, the rules require him to stop drawing and play that piece when he gets it.

Let us suppose that at the beginning of a game the double-five is the highest double out, and so is led. The leader scores ten. If now the six-five be played, for example, no score is made, because the aggregate number of spots on the free ends is sixteen, which is not a multiple of five.

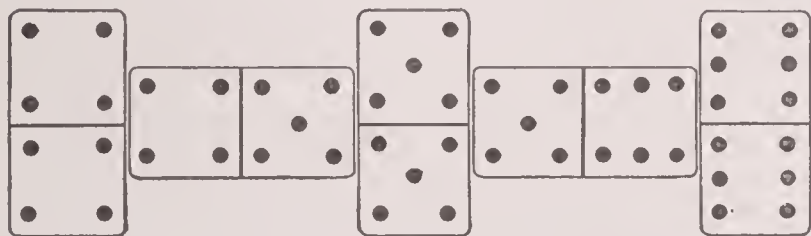


(Fig. 4)

If, however, the five-four now be played, ten is scored, since the sum of the pips on the free ends (six and four) is ten, a multiple of five. (Fig. 4.)

Let us suppose the double-four is played next. There would be no score, since the count made by this play is six plus eight, or fourteen. If now the double-six be played, the count will be twelve plus eight, which makes the score twenty. (Fig. 5.)

The player who first disposes of all the pieces in his hand cries "Muggins!" and, as in the "block game," he adds to his score the sum of the



(Fig. 5)

piers in his opponents' hands; in case of a block, the same rules obtain as in the block game. But, as stated before, all scores in Muggins are counted in multiples of five, and the one who first plays

out his hand scores the sum of the multiples of five, which are the nearest the aggregate number of pips in the respective hands of his opponents.

Thus, if the pips held by one of the other players aggregate twelve, while another holds thirteen, the scores would be twenty-five, ten from the first hand and fifteen from the second. A deuce-blank, ace-blank, double-ace, or double-blank held alone counts nothing, while either a trey-ace, double-deuce, or deuce-ace counts five.

The score of the game of Muggins is two hundred if two play, or one hundred and fifty if there are three or more players. The score is usually kept as follows: Five is scored by means of an oblique straight line, thus  $\diagdown$ ; ten, by an X; fifteen,  $X\diagdown$ ; twenty, XX; and so on. In this way the score of each player is kept in a single straight line, and the operation of adding the separate numbers is avoided. When ten X's have been given a player, it indicates that he is credited with one hundred points. A line is then drawn through that part of the score, which simplifies the keeping of the rest of it. Thus, a score of one hundred and twenty-five would be put down in this way, ~~XXXXXXXXXXXX~~XX $\diagdown$ .



## BERGEN

THE Bergen game may be played by two, three or four players. Each draws six pieces. The lowest double leads at the beginning of the game, and this play entitles the leader to be credited with a "double-header." After the first lead, the players lead in turn from left to right. If a player has no double when his turn comes to lead, he plays the lowest

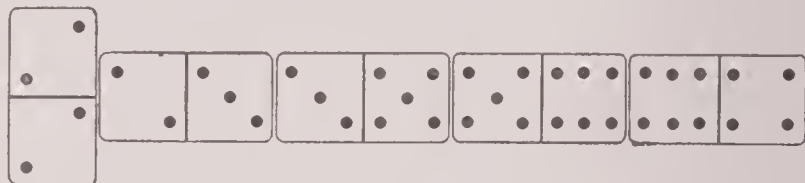


(Fig. 6)

piece in his hand. The object of each player is to play a piece that will make

both extremities of the line the same, and thus score a "double-header," or to make a "triple-header" either by playing a double on a double-header or by playing a piece such that its free end has the same value as a double at the other extremity. Thus, if the trey-deuce, five-trey and six-five have been played in turn, and the next player has the six-deuce, he may play it at either end of the line (as at 1 or at 2, fig. 6) and thus make a double header either of deuces or of sixes. (Fig. 6.)

If, now, the next player has a double which matches the free ends, he can play it at either end, and thus make a triple-header. On the other hand, if after the trey-deuce, five-trey, and six-five have been played, as above, a double-deuce is played, the next player may make a triple-header by playing a six-four. (Fig. 7.)



(Fig. 7)

If when a player's turn comes he is unable to play, he draws one piece from the pool. If he is then able to play, he does so; if not, the next player plays, or if unable to do so, draws. The player who first disposes of all his pieces wins the hand. If the game be "blocked," the hand is won by the player holding the least number of pips, unless he holds a double and the others have none, in which case the lowest of those without a double wins; if each has a double, the one holding the lowest double wins; if one player holds two or more doubles, and another holds less doubles than he, the latter wins, regardless of the relative values of the doubles.

The score for the play is fifteen when two play, and ten when there are more than two players. A triple-header counts three; a double-header two; and a won hand one. But when a player is within three points of finishing the game, a triple header counts him only two; and if he is within two points, either a triple-header or a double-header counts him only one. After the lead a careful player usually retains doubles in his hand as long as possible, so that he may be prepared to make a triple header.

There are numerous other games which may be played with Dominoes, but the foregoing are the ones which are best known, and they are sufficient for the ordinary player.

## ROLLER POLO

THE game of Roller Polo, like ice hockey, was developed from lawn hockey, and in the objects sought by the players in these games there is great similarity. In the methods of play, however, there is a vast difference. In Roller Polo, there is no rule forbidding off-side play, and a much heavier and stouter stick is used than in lawn hockey. Then, too, in the former game, the stick is almost always held in one hand. Roller Polo, is a much more open game, and the tries for goal may be made from any direction and from unlimited distances.

A team is composed of five players, who are designated as follows: One *goal-tend*, one *half-back*, one *center*, and two *rushers*. The game is played with a rubber-covered ball, which is about the size and weight of the cricket ball used in lawn hockey. A Roller Polo rink should be rectangular in shape, and may be of any size agreed upon by the captains of the opposing teams. It should be surrounded by boards extending from the surface to a height of at least two feet; but unless this boarding extends to a height of four feet or more, it should be surmounted by a railing, so as to prevent injury to the player by falling over the low boards. The goal line is at each end of the rink and must be not less than ten feet from the boundary of the playing space. The two goals are erected in the middle of these two lines. The two posts of each goal should be three feet in height and four and one-half feet apart, and a net of some kind is usually stretched between them, to catch the ball when a goal is made. From the center point between the goal posts, a semicircle, with a radius of three-feet, is plainly marked on the rink, and no player except the goal-tend is allowed within this circle.

In beginning the game, the ball is neither faced nor bullied, but is placed in the center of the rink, and at the signal to commence play, one player of each side, usually one of the rushers, charges toward the ball and tries to gain possession of it. The center and the other rusher then join the first rusher in an attempt to carry the ball to a position near their opponents' goal, suitable for a try-at-goal. These three men generally rush the ball down the rink in a triangular formation, either equidistant from each other, or with the two side men only a short distance behind the middle man. The rushers should be fast skaters, as well as accurate goal shots, and should be especially





good at receiving, passing, and dribbling, the ball. The duties of the center are very similar to those of the rushers, and he should possess about the same qualifications, though he is often not so fast a skater as the rushers. The position of half-back is a very difficult one, for not only is he expected to stop all long passes for goal, but he is the first defense man met by the opponents' rushers in their attack on the goal. The goal-tend should be a cool, active player, and should be especially adept at stopping short tries for goal, which often come with great speed and from a variety of directions. He never leaves his station between the goal posts except in cases of great emergency. The game is usually divided into three fifteen-minute innings of actual play, with an interval for rest between each two. A goal is made when the ball passes between the goal posts below the line of their tops. Each goal counts one point, and the side scoring the greater number of goals in the three innings wins the game. If the ball goes out of bounds, it is replaced opposite the point where it went out, and not less than four feet from the boundary. Two balls are usually furnished the referee; if one of them is cut or ripped, or passes the boundary and is out of play for thirty seconds or more, the other is put in play by the referee.

A foul is declared: (*a*) If any player stop or strike the ball when any part of his person is touching the surface of the rink; (*b*) if he stop, catch, or bat, the ball with his hands or arms, or if any player, except the goal-tend, kick the ball with his feet or skate; (*c*) if he enter the semicircle in which the goal is included; (*d*) if he hold another player at any time; (*e*) if he run about or strike the ball while one or both of his skates are off; (*f*) if he stop before or near the goal to readjust his skates; (*g*) if he insert his stick between the arm and the stick of another player. The penalty for fouls is the deduction of one point from the score of the offending side for every third foul. When a third foul has been penalized in this manner, the game is continued from the point where the last foul was called. If a foul that prevents a goal from being made is made by the goal-tend, one point is given to his opponents.

Following are the rules for Roller Polo, as adopted by the National Polo Association:—

1. Each team shall consist of five players, to be designated as follows: One *goal-tend*, one *half-back*, one *center*, two *rushers*.

2. The ball shall be the regulation rubber-covered polo ball, which shall be furnished by the manager of the home club, and shall become the property of the winning club.

3. The sticks shall not exceed four feet in length, one and one-eighth inches in diameter and fifteen ounces in weight. The crook of the stick may be covered with leather, but no metallic substance shall be allowed near that end of the stick. A

cord or strap shall be attached to the handle to prevent the stick from slipping from the hand, but it shall not extend more than ten inches beyond the end.

4. (a) All games shall be played on circular-runnered skates, in good order, without any extra appliances; the rollers shall be of standard size, with a smooth brass face. No skate shall be more than two inches shorter than the ordinary boot or shoe of the player, and said boot or shoe shall have no foreign substance attached to it. The spindle must not project more than one-quarter of an inch from the skate.

(b) The skates must be securely fastened to the feet, and no player may call time to readjust his skate.

(c) For each championship game, the home club shall furnish two balls to the referee for use. If the ball in play is batted out of the playing surface, and is not returned within thirty seconds, the other ball shall be put in play by the referee. As often as one of the two is lost, another must be substituted, so that the referee shall at all times, after the game begins, have two balls ready for use.

(d) The last ball in play shall become the property of the winning club. Each ball used in championship games shall be examined by the secretary of this association, inclosed in a paper box and sealed with his seal; which seal shall not be broken except by the referee, in the presence of the two contesting teams, after play has been called.

(e) Should the ball become out of shape, cut or ripped, so as to expose the yarn, or in any way be so injured, in the opinion of the referee, as to unfit it for use, the referee, on being appealed to by either captain, shall at once put the alternate ball into use and call for a new one.

(f) In case a skate is broken, and a player is thereby obliged to leave the surface, his place must be taken by a substitute in uniform, but the player retiring cannot resume his position until a goal has been made, or until the time limit has expired.

5. The goal shall be three feet in height and four and one-half feet in width. The surface of the rink must be pumiced and swept before each game.

6. In playing a game, the front of the cage or goal must be not less than ten feet from the end, and equidistant from the sides of the playing surface of the rink.

7. No player, except the goal-tend, shall be allowed within a semicircle plainly indicated in front of the goal, the radius of which must be three feet from the center of the goal line. It is understood that if the goal-tend leaves his position, whoever for the time being takes his place, is the goal-tend.

8. (a) To start the game, the ball shall be placed at the middle of a straight line drawn through the center of each goal, and at the whistle of the referee, shall be charged upon by a player from each team.

(b) A goal is won by the passage of the ball into the cage or net from the front, where it must remain until removed by the referee.

9. The teams shall exchange goals whenever a goal is scored.

10. (a) Three innings of fifteen minutes each of actual playing time shall constitute a game, except as provided for hereinafter, and the club winning the most goals in that time shall be the winner of the game.

(b) In computing the time, all waits between goals and during the progress of the game on calls of time shall be deducted from the actual time, and only the playing time of the goal shall be reckoned.

(c) The final goal shall be the one which ends at the expiration of the third fifteen minutes of actual playing time, unless the clubs are tied, in which case the deciding goal shall be played.



(d) In case a game is interrupted by unavoidable accident or other unforeseen cause, and cannot be continued, the game shall be awarded to the club leading at the time of the interruption, providing two periods have been played.

11. There shall be a corps of official referees, timekeepers and scorers appointed by the secretary, said timekeepers and scorers to be appointed on recommendation of the local managers. Time must be kept by a stop watch or a stop clock. The expenses of the officials shall be paid by the manager of the rink in which the game is played. If either official fails to appear at any game, a substitute shall be appointed by the captain of the visiting club.

12. Any timekeeper may be removed upon the protest of three clubs.

13. Timekeepers and scorers shall receive instructions from the secretary, and will render themselves liable to removal by neglecting to comply with the same.

14. No person but the players and referee shall be permitted on the surface during a match, unless assistance is to be rendered in case of accident, or unless upon mutual invitation of the captains and referee.

15. (a) The referee shall have charge of the clubs and the surface from the time the game is called until it is finished or postponed. He shall start and call the game, shall settle all disputed points, and shall announce each goal, giving its time, and all fouls and their nature.

(b) The referee is master of the surface from the beginning of the game to its close, and is entitled to the respect of the spectators. Any person offering any insult or indignity to him shall be ejected from the premises.

(c) He must invariably be addressed by the players as Mr. Referee. He must compel the players to observe the provisions of the playing rules.

(d) The referee must keep the contesting teams playing constantly from the beginning of the game to its termination, allowing for such delays as are rendered unavoidable by accident.

(e) The referee must call play promptly at the hour designated by the home club, and on the blast of the whistle the contest shall begin. When the whistle is blown for time, play immediately ceases; and no goal, even though it is made, can be counted until the signal has been given to renew play.

16. The skates of each club shall be examined by the referee and the manager immediately before and after the players go on the surface. Any player found with illegal skates, rolls or spindles, shall be fined not less than \$5 nor more than \$10, and his club shall be fined \$100, which must be paid within twenty-four hours, on penalty of loss of franchise; the money shall go to the opposing club. No player shall be allowed to leave the surface without permission of the referee, who shall examine his skates on his return.

17. There shall be an official scorer connected with each club who shall prepare a summary of each contest, which shall contain the names of players, date of game, the number and order of rushes, goals won by each team and a record of fouls, giving the names of players making the same, and the time occupied in playing for each goal. A copy of this summary shall be furnished the officiating referee before he leaves the rink, and he shall at once mail the same to the secretary.

18. If, after the completion of a game and the decision of the referee, either club has cause for dissatisfaction with the rulings of the referee, they may have the matter decided by the association, by submitting within twenty-four hours a formal complaint to the secretary, signed by the captain or manager of the team, stating their reasons for the complaint; but no club that does not abide by the decision of the referee and play the game out under his direction, shall have the right to enter a complaint. Any club refusing a game shall be liable to expulsion.

19. If the ball go out of bounds, the referee shall blow his whistle to call time and place the ball at the point opposite where it went out, at least four feet from the rail. In renewing play, the players who do so must stand in position to knock the ball lengthwise of the surface, with their backs toward the sides.

20. Time shall be called by the referee whenever a foul occurs. Upon the renewal of the game, the ball must be placed where the foul occurred.

21. If time is called while a goal is being played for, the play shall not cease until the referee's whistle is blown.

22. A goal shall be taken from either side for every third foul committed by it during the progress of a game. After taking cognizance of a third foul and announcing the result, the referee shall continue the game from where it left off at the call of foul.

23. It shall be deemed a foul: (a) If a player stop or strike the ball when any part of his person is touching the surface; (b) if any player stop, catch, or bat, the ball with his hands or arms; (c) if any player, save the goal-tend or one taking his place, kick the ball with his foot or skate; (d) if the player intentionally violate Rule 7; (e) if any player hold any other player on the surface or against the rail; (f) if any player run about or strike the ball while one of his skates is off; (g) if any player stop before or in the immediate vicinity of the goal cage to readjust his skates; (h) if any player put his stick between the arm and body of another player.

24. (a) If a referee decides that a foul is made by the goal-tend or by any player taking his place for the time being, which prevents a goal from being made, he shall give a goal to the other team.

(b) If the goal-tend removes, or attempts to remove, the ball after it goes into the goal, he shall be fined \$5 and the goal shall be allowed to the opposing side.

25. Any act by a player that is manifestly intended as an unwarrantable interference with another player, may be declared a foul by the referee from his own observation or upon complaint by the captain of the offended side.

26. If, on account of the absence or injury of any player, a substitute is necessary, and no regular member of the team is present, any person may be selected, with the approval of the captain of the opposing team, given in the presence of the referee.

27. If a dispute shall arise on the surface, it shall be settled by the referee and the two captains. The players shall immediately resume their positions on the floor and take no part in the discussion unless called upon by the referee. Any player violating this rule shall be fined by the referee, not exceeding \$5 for each and every offense.

28. If any club refuse to play a scheduled game, or to abide by the decision of the referee, it shall forfeit the game and be liable to expulsion; and the members leaving the floor shall be liable to expulsion and subject to an individual fine of \$25.

29. If from any cause during the game play shall be suspended, each player shall fall back to his position and remain standing quietly in an upright position, and shall refrain from touching or knocking the ball. Any player violating this rule shall be fined \$1.

30. At the beginning of play, the visiting club shall take the goal nearest the entrance to the surface.

31. Any club not answering to the call of the referee on the surface at the advertised time of beginning the game, shall be fined \$10, said sum to go to the home team.



32. No player shall wear any extra appliances larger than the ordinary size, such as masks, shin-pads, chest-protectors, etc., to impede the progress of the ball. Any player violating this rule shall be ordered from the floor by the referee to make such changes as the referee may desire. The player shall also be liable to a fine of not more than \$3 nor less than \$1. Any player holding another, or in any way using his hands to obstruct his progress, shall be fined not more than \$5 for the first, nor more than \$10 for the second, offense.

33. (a) Any player throwing his stick at the ball or across the surface shall be fined \$5, and for a second offense during the same game, \$10.

(b) Any player deliberately tripping or striking another shall be fined \$10, and for a second offense during the same game, \$20, and he shall also be ordered from the surface for the remainder of the game.

(c) Any players engaging in a broil or altercation upon the surface shall be immediately ordered from the surface and fined \$20 each, and they may be suspended or expelled in addition to their fines, according to the gravity of their offense.

(d) Any player using profane or obscene language on the floor, or acting in an ungentlemanly manner sufficient to attract the attention of the spectators, shall be fined \$10, and he may be suspended or expelled in addition to his fine.

(e) Any act by any player that is manifestly intended to delay or obstruct the game, or is contrary to the spirit of fair and honorable play, shall subject the player to a fine, suspension or expulsion, according to its gravity, by the referee or the Board of Directors.

34. If, at any time or place, any player shall use abusive or insulting language, or offer violence to any referee, the latter may prefer charges against the player; and if the charge be proven true, the Board of Directors shall fine the player from \$10 to \$25, or expel him, according to the gravity of the offense.

35. (a) When any player is fined by a referee, or by the directors of the association, such fine shall be collected by said referee before leaving the hall, after notifying the offending player and his captain or manager; and in case of his inability to collect such fine, the referee for the ensuing game shall collect the same before the beginning of the contest, and in default thereof shall award the game to the visiting club.

(b) No referee shall remit a fine once imposed, under penalty of himself incurring the same.

(c) Any fined player shall be considered eligible to play if his fine has been mailed to the secretary within twenty-four hours after receiving the notice of the same from the secretary or the referee, the burden of proof being upon the manager, and the postmarks being evidence of the receipt and dispatch of letters.

36. Any club playing a player who has unpaid fines shall, on knowledge of the same coming to the secretary, be declared by him to have forfeited every such game to the opposing club.

37. A player may appeal through his manager to the Board of Directors regarding any fine over \$5 imposed by a referee; but the referee shall be upheld unless four managers vote against his decision, the interested manager refraining from voting, and the vote being one of record.

38. In case of any disturbance, unnecessary noise, or interference with the game or the referee by any person, the referee shall have the right to suspend the game until quiet is restored, or, if necessary, he may order the offending party or parties expelled from the rink. In case his orders are not obeyed, he may stop the play and award the game to the visiting club.

## WATER POLO

WATER POLO, though differing in many respects from the other forms of polo, retains a sufficient number of their characteristics to entitle it to be classed with them. The game is played either in a swimming pool or in open water, though the latter is preferable, since it gives no opportunity for the players to rest by touching the sides or bottom. Good swimming is required of all the players, and constant practice is necessary to enable them to play well. The game increases the staying power of a swimmer, and is a beneficial and interesting form of aquatic sport.

### THE GAME

AN ORDINARY Association football is used, which is about twenty-eight inches in circumference, covered with rubber, and inflated with air.

A team consists of seven players, of whom three are *forwards*, one is *half-back*, two are *full-backs* and one is *goal-tend*.

The playing space must be between eighteen and thirty yards in length, and not more than twenty yards in width. The goals, which are placed in the middle of the end lines, consist each of two goal posts ten feet apart, and when the water is more than five feet in depth, a crossbar must be placed three feet above the surface; when the water is less than five feet in depth the crossbar must be placed eight feet from the bottom. In swimming pools the goal posts are usually secured to the bottom, but in open water they are secured to floats which are anchored in place. A net is usually placed back of the goal posts to catch the ball when it passes between them, and this assists the referee in deciding when a goal has been made.

In beginning the game, the two teams take their places in line with their respective goals, and when all is ready the referee cries "Go!" and tosses the ball into the water at the center of the playing space. The players swim rapidly toward the ball, with the exception of the goal-tend, who remains near his goal. The center forward, who is usually the fastest swimmer of his team, goes directly toward the ball, and if he reaches it before his opponents, he passes it back to one of his own side. The ball is then passed, hit, or dribbled toward the opponents' goal in the attempt to send it between the goal posts. A goal is scored if the entire ball passes under the crossbar and beyond the goal posts.

The game is divided into two halves of seven minutes each, with an interval of three minutes for rest between the halves. At the beginning of the second half, and whenever a goal is scored, play is resumed in the





same manner in which it was started at the beginning of the match. The teams exchange goals at the beginning of the second period of play.

Fouls are awarded for the following violations of the rules: (*a*) Standing on or touching the bottom during any part of the game, unless for the purpose of resting; (*b*) touching the ball with both hands; (*c*) jumping from the bottom, except at the start; (*d*) holding to any artificial support during any portion of the game; (*e*) ducking an opponent when he is not in possession of the ball; (*f*) retaining possession of the ball when ducked; (*g*) holding, pulling back or pushing an opponent, or turning on the back and kicking him off.

The penalty for a foul is a free throw for the opposing side from the place where the foul occurred, but a goal cannot be scored from a free throw until after the ball has touched at least one other player. When a free throw is awarded to a side, the throw is taken by that one of its players who is nearest the spot where the foul occurred. The other players must remain in the respective positions held by them when the foul was declared, until the ball has left the hand of the thrower.

The goal-tend is exempted from the rule relating to standing, jumping from the bottom, and using both hands, but he may not throw the ball more than half the distance to his opponents' goal, under penalty of a foul.

If a player sends the ball across one of the side boundary lines, a free throw is given to his opponents from the point where it crossed the line. If a player sends the ball across his own goal line, a free corner-throw is given to his opponents, but if the attacking side sends the ball over, a free throw is given to the defending goal-tend.

The fastest swimmers and those who are most adept at passing the ball, are chosen as forwards; the captain of the team usually plays at half-back, which is the most difficult position; the full-backs should be steady, cool players, with much endurance; the goal-tend need not be a fast swimmer, but should be very quick and should have a thorough knowledge of the points of the game.

Following are the International Rules for Water Polo, as adopted by the Amateur Swimming Association:—

## RULES

1. *Ball*—The ball shall be round and fully inflated. It shall measure not less than twenty-six and one-half inches, nor more than twenty-eight and one-half inches, in circumference. It shall be waterproof, with no strapped seams outside, and no grease or other objectionable substance on the surface. The ball shall be furnished by the home team.

2. *Goals*—The width of the goals shall be ten feet; the crossbar shall be three feet above the surface when the water is five feet or more in depth, and eight feet from the bottom when the water is less than five feet in depth. The goal-posts shall be furnished by the home team.

(NOTE—Whenever practicable, nets should be attached to the goal-posts.)

3. *Caps and Flags*—One team shall wear dark blue caps and the other team white caps. Each goal-scorer shall be provided with a red flag, and the referee with a dark blue flag, a white flag and a bell.

4. *Field of Play*—The distance between the goals shall not be more than thirty yards, nor less than nineteen yards; the width shall not be more than twenty yards, and shall be the same throughout the field of play. The goal-posts shall be fixed at least one foot from the end of the bath or any obstruction.

5. *Depth*—The water shall not be less than three feet in depth.

6. *Time*—The duration of the match shall be fourteen minutes, divided into two halves. Three minutes shall be allowed at half-time for change of goals. When a goal has been scored, the time from the scoring of the goal to the beginning of play, or time occupied by disputes or fouls, shall not be reckoned as part of the time of play.

7. *Officials*—The officials shall consist of a referee, a timekeeper and two goal-scorers.

8. *Referee*—The referee's duties shall be to start the game, stop all unfair play, decide all cases of dispute, declare fouls, goals, half-time and time, and see that these rules are properly carried out. He may proclaim a foul without its being claimed by any of the competitors, and shall decide upon and declare all goals, whether signified by the goal-scorers or not. The referee's decision is final.

9. *Goal-scorers*—The goal-scorers shall stand at the side near each goal, and when they consider that the ball has passed through the goal, at their respective ends only, they shall signify the same to the referee by means of a red flag. They shall not change ends, and shall keep the score of goals of each team at their respective ends.

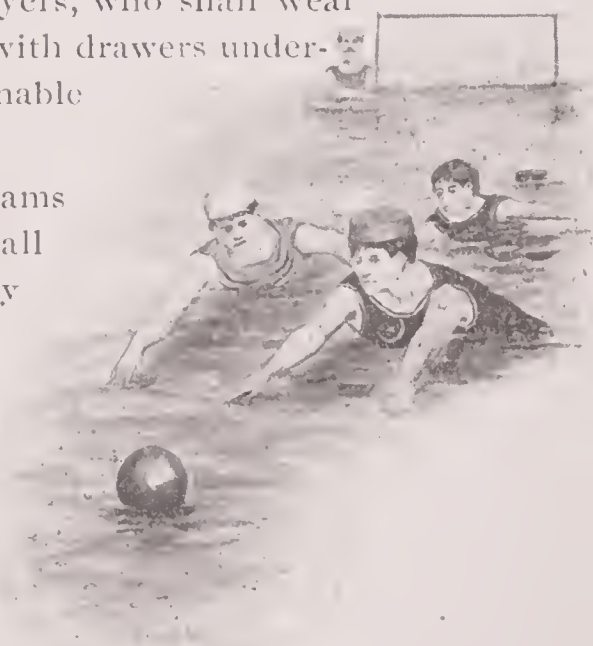
10. *Teams*—Each side shall consist of not more than seven players, who shall wear blue caps and white caps, respectively, and drawers, or costumes with drawers underneath the costumes. In baths, no grease, oil or other objectionable substance shall be rubbed on the body.

11. *Captains*—The captains shall be playing members of the teams they represent; they shall agree upon all preliminaries, and shall toss for choice of goals. If they are unable to agree on any point, the referee shall decide for them.

12. *Starting*—The players shall enter the water and place themselves in line with their respective goals. The referee shall stand in line with the center of the course, and, having ascertained that the captains are ready, shall give the word "Go!" and immediately throw the ball into the water at the center. A goal shall not be scored after starting or restarting until the ball has been handled by an opposing player or by a player on the same side, who shall be within half-distance of the goal attacked. The ball must be handled by more than one player before a goal can be scored.

13. *Scoring*—A goal shall be scored by the entire ball passing beyond the goal-posts and under the crossbar.

14. *Fouls*—It shall be a Foul: (a) to touch the ball with both hands at the same time; (b) to hold to the rail or side during any part of the game; (c) to stand on or touch the bottom during any part of the game, unless for the purpose of resting; (d) to duck an opponent, unless he is holding the ball, or to re-





tain possession of the ball when ducked; (*e*) to jump from the bottom or push from the side (except at starting or restarting) in order to play the ball or duck an opponent; (*f*) to hold, pull back or push off from an opponent; (*g*) to turn on the back and kick at an opponent; (*h*) to assist a player at the start or restart.

(NOTE—Dribbling or striking the ball is not holding, but lifting, carrying, pressing under water, or placing the hand under or over the ball when actually touching, is holding. Dribbling the ball up and through the posts is permissible.)

15. *Penalties*—The penalty for each foul shall be a free throw to the opposing side from the place where the foul occurred. A goal cannot be scored from a free throw unless the ball has been handled by at least one other player.

16. *Wilful Fouls*—If, in the opinion of the referee, a player wilfully commits an ordinary foul, he shall be cautioned for the first offense, and for the second offense the referee shall have the power to order him out of the water until a goal has been scored. It shall be a wilful foul for a player to start before the word "Go," deliberately to waste time, or to take up a position within a yard of his opponents' goal.

17. *Declaring Fouls*—The referee shall declare a foul by blowing his whistle and exhibiting the color of the side to which the free throw is awarded. The player nearest the point at which the foul occurred shall take the throw. The other players shall remain in their respective positions from the time of the blowing of the whistle until the ball has left the hand of the player taking the throw.

18. *Goal-keeper*—The goal-keeper may stand to defend his goal. He must not throw the ball beyond half-distance; the penalty for so doing shall be a free throw to the opposing side from half-distance at either side of the field of play. The goal-keeper is exempt from clauses (*a*), (*c*) and (*e*) in Rule 14, but he may be treated as any other player when in possession of the ball.

19. *Goal Line and Corner-throws*—A player throwing the ball over his own goal line shall concede a free corner-throw to his opponents, but if the attacking side throw the ball over, a free throw shall be given to their opponents' goal-keeper.

(NOTE—In the event of the ball having become dead by being thrown over the goal line, it must not be considered in play until it has left the goal-keeper's hands.)

20. *Out of Play*—Should a player send the ball out of the field of play at either side, it shall be thrown in any direction from the point at which it went out, by one of the opposing side, and shall be considered a free throw.

21. *Declaring Goals, Time, etc.*—The referee shall declare fouls, half-time and time, by whistle; goals, by bell.

22. *Leaving the Water*—A player leaving the water, or sitting or standing on the steps, or sitting on the side of the bath in which the match is being played, except at half-time or by permission of the referee, shall not reënter the game until a goal has been scored, or until half-time. Should a player leave the water, he can only reënter at his own goal line.

## ICE HOCKEY

WITH the increase in the number of artificial ice rinks, especially in the larger cities, has come a corresponding increase in the popularity of some of the winter sports that were formerly confined to the extreme northern states, until at the present time ice skating and the games of which it forms a part are well known even in the south. Ice Hockey is, without doubt, the most popular of these games. It should not be confused with ice polo, or with lawn hockey, from which it was developed. Ice polo differs in several important particulars from Ice Hockey, and is very similar to roller polo, from which it is said to have been taken. Lawn hockey, roller polo and ice polo are described in separate articles.

Since it is only in a few of the northern states that the winters are severe enough to furnish ice suitable for Ice Hockey for any considerable length of time, the games are generally played in artificial ice rinks, so that the description to be given here will apply especially to that style of game. As played out of doors, it differs from the indoor game only in a few minor points, which are entirely dependent upon the difference in the location of the playing spaces, or rinks.



## THE GAME

A HOCKEY rink is rectangular in shape, and should not be less than 112 feet in length and 58 feet in width. It is bounded on the two longer sides by upright planking, which extends from the surface to a height of two or more feet. A goal is placed in the middle of each end, or goal line, which should not be less than five feet from the end of the ice. Each goal is composed of upright posts firmly fixed in the ice six feet apart, and projecting four feet above the surface. The exact center of the rink is marked in some manner, usually by a small nick or a spot on the ice.

Each player is provided with a hockey stick (Fig. I) which is usually made of second-growth ash, and has a handle that may be of any desired length or diameter. The handle is curved at the lower end so as to form a blade, which must not be more than thirteen inches in length and three inches in width. The lower edge of the blade is flat, so that when placed upon the ice it will touch throughout its length.



Instead of a ball being used, the game is played with a *puck* (Fig. II) which is a solid disk of vulcanized rubber, three inches in diameter and



one inch in thickness. The surface of the puck is smoothly finished, so that the little object slides along the ice with great ease and rapidity.

An Ice Hockey team is composed of seven players, including four *forwards* or *rushers*, who form the attack, a *point*, a *cover-point*, and a *goal-keeper* or *goal-tend*. The three latter give their attention entirely to defensive play, though the cover-point is sometimes called on to assist the forwards.

A good Ice Hockey player must be perfectly at home on skates, and must be able not only to skate rapidly, but to stop, turn and dodge in every conceivable way. He should wear regulation ice-hockey skates, the blades of which are straight on the bottom, and are thus best adapted to making quick stops and turns.



(Fig. II)

The object of the players of each team is to drive the puck between their opponents' goal posts, below the imaginary line between their tops, and to prevent its passage between their own goal posts. The game is divided into two halves, usually of thirty minutes each, with an interval of ten minutes between them for rest. The team scoring the most goals in the two halves wins the game. If the score be a tie at the close of the second half, ten minutes more is allowed for play, and if the score still be a tie at the end of the ten minutes, the game must stand as a tie until decided in another match.

The officials of the game are a referee, two umpires and a timekeeper, who are selected by the captains of the contesting teams. The referee follows the play and settles all disputed points regarding the rules. One of the umpires remains behind either goal throughout the game, and they settle all questions regarding the goals.

The following are the approximate positions in which the different players of each team stand at the beginning of the game, though these are varied according to the judgment of the different captains: The two forwards, who are best at driving the puck, stand near the center of the rink. The other two forwards, who should be the swiftest skaters of the four, stand a short distance back of the center forwards, and a few feet nearer the side lines, one being on either side. The cover-point takes his place near the middle of the rink, and about one-third the distance to his goal behind the forwards. The point stands behind the cover-point and about midway between the latter's position and the goal. The goal-keeper stands between the goal posts.

In beginning the game, the puck is *faced* at the center of the rink between two of the opposing center forwards, that is, it is placed on the center mark and the two men stand facing the puck from opposite sides, each with the blade of his stick touching the side of the puck that is nearest his own goal. When the referee calls "Play!" each strives to gain possession of the puck and to pass it to one of the other forwards of his team. As soon as one of the four gets it, he rushes it toward his opponents' goal, and the other three forwards keep just abreast of him, but spread out across the rink in an irregular line. One forward drives the puck only a short distance when he passes it across to one of the other

forwards, who, in turn, retains possession of it for a few seconds and then passes it to another of the four.

By thus passing the puck from one forward to another, the danger of an opponent gaining possession of it is lessened. After having passed the opposing forwards, the cover-point is the first defense man encountered by the forward who has possession of the puck. He passes it across to one of the other forwards, and in this way, by a succession of quick passes, they endeavor to get it past the cover-point. If they succeed in doing this, they next encounter the point, whom they endeavor to pass in a similar manner. Having succeeded in eluding these two defense men, the advancing forwards next attack the goal, which is defended principally by the goal-keeper. The opposing forwards, cover-point, and point follow the puck as it is rushed down the field, and they are thus present to assist in defending the goal when attacked.

The most exciting part of the game is usually seen when the puck is near one of the goals. Shots and stops follow each other in quick succession, until a goal is either scored or the puck is rushed away from the goal toward the other end of the rink. In the latter event, the defenders become the attacking party, and they endeavor by tactics similar to those first employed, to drive the puck through their opponents' goal.

If the puck goes off the ice behind the goal line, it is brought out by the referee to a point five yards from where it first crossed that line, and is faced in the same manner as at the beginning of the game. If it goes off the ice at the side, it is brought in and faced in a similar manner three yards from the side.

There are two distinct ways of driving the puck from one part of the rink to another, one being called *lifting* and the other, *dribbling*. In the former, the player gives a peculiar twist to his wrist at the moment that he strikes the puck a powerful blow with his stick, so that the little object is lifted clear of the ice and travels sometimes thirty yards or more over the heads of the players. The "lift stroke" is used by a player in driving the ball from the vicinity of his own goal toward that of his opponents. It is also valuable in shooting for goal, since it is much more difficult for the goal-keeper to stop a puck that is traveling swiftly through the air than one that is sliding along the ice.

Dribbling consists in advancing the puck by a succession of short, alternate right and left strokes, which tend to confuse an opponent. This method is employed by a player in running with the puck, which he often does rather than lose possession of it by a long lift.

The sides of the rink are made use of, especially when a player is making a run, by driving the puck against them so that it will carom back toward the middle of the rink at a sharp angle. This assists the runner in getting the puck past an opponent, or in passing it to another of his own side, while at the same time he deceives his opponents as to the direction in which it is to go.

The cover-point and point usually lift the puck when near their own goal, so as to drive it near that of their opponents. These two players



act as *feeders* for the forwards, and, whenever possible, they dribble the ball down the rink and pass it to one of the latter.

The goal-keeper rarely leaves his station between the goal posts, and then only to return the puck toward his opponents' goal, when it has been driven behind the line of and near his own goal by a long lift. In this case, the other players will, of course, be near the point from which the puck was lifted, so it is safe for the goal-keeper to leave his goal for a moment. Even then, however, he signals the point to fall back temporarily into the position of goal-keeper.

In Ice Hockey, a player always holds his stick with both hands, thus lessening the possibility of having it struck from his grasp, while, at the same time, the force and precision of his drives are increased.

One of the most important rules in Ice Hockey is the "off-side" rule, which is similar to that which obtains in football. This rule prevents a player from passing the puck forward to another member of his own team, but admits of his passing it across the rink at right angles to the side lines or back toward his own goal.

A player is off-side when he is nearer his opponents' goal than is the player of his own side who was the last to hit the puck. When off-side he is not allowed to touch the puck or to interfere with an opponent until he is again "on-side." He is put on-side if the puck is touched by an opponent, or if at any time he is nearer to his own goal than the one of his side who has the puck in his possession, or who was the last to play it behind the off-side player. If a player obstructs an opponent or touches the puck when off-side, the game is stopped, and the puck is faced at the point where it was when the off-side rule was violated.

The puck may be advanced only by means of the stick, but it may be stopped by the stick, the skates, or any part of the body. The goal-keeper often intercepts a try-for-goal with his body, and in this way sometimes receives a painful bruise from a swiftly driven puck. He is forbidden by the rules to lie, sit or kneel on the ice, and usually stops the puck with his skates when it is driven along the surface.

The position of goal-keeper is one of the most difficult on an Ice Hockey team, for it is through his good play that shots for goal must be prevented from scoring. When he gains possession of the puck, he seldom has room or opportunity either for a long drive or for a direct pass to one of the other players of his team. Instead, he usually drives it toward one of the side lines, thus giving his team an opportunity of getting it, and preventing another try-for-goal until the puck can be worked back to a favorable position again.

There are many opportunities for fouls and tricky plays if the player is so inclined, and both the referee and the umpires should be constantly on the watch to detect and punish all irregularities. The rules forbid a player to raise his stick above the level of his shoulders, or to trip, kick, push or otherwise play with unnecessary roughness, under penalty of disqualification. The referee may rule a disqualified player off the ice for such time as he may think advisable.

Ice Hockey is a game that calls for constant exertion, especially on the part of the forwards, and one who plays it should be in the best physical condition and should have an exceptional amount of endurance and pluck. A beginner should play one of the defense positions and become well hardened before trying to qualify as a forward.

Following are the rules of Ice Hockey, as adopted by the Amateur Hockey League of New York:—

### RULES

1. *Team*—A team shall be composed of seven players, who shall be bona-fide members of the club they represent.

2. *Rink*—The rink shall be at least one hundred and twelve feet by fifty-eight feet.

3. *Goals*—A goal shall be placed in the middle of each goal line. It shall be composed of two upright posts, four feet in height, placed six feet apart, and at least five feet from the end of the ice. The goal posts shall be firmly fixed. In the event of a goal post being displaced or broken, the referee shall blow his whistle and the game shall not proceed until the goal is replaced.

4. *Puck*—The puck shall be “faced” by being placed between the sticks of two opponents, each of whom strives to obtain possession of it when the referee calls “Play!”

5. *Match*—Two halves of twenty minutes each, exclusive of stoppages, with an intermission of ten minutes between them, shall be the time allowed for a game. The game shall be won by the team scoring the greater number of goals during that time. In case of a tie after playing the specified time, play will continue for ten minutes more, when, in the event of the score still being even, another game will be played at a time and place mutually agreed upon, such time to be prior to the next scheduled game. Goals shall be changed after each half.

6. *Change of Players*—No change of players shall be made after a game has begun, except by reason of accident or injury during the game. Should any player meet with an accident during a game, and be compelled to leave the ice, his side shall have the privilege of putting on a spare man from the reserves to equalize the teams. In the event of any dispute between the captains as to such player's fitness to continue the game, the matter shall at once be decided by the referee.

7. *Stoppages*—Should a game be temporarily stopped by the infringement of any of the rules, the captain of the opposing team may claim the right to have the puck taken back and faced at the spot from which it was last played before such infringement occurred.

8. *Off-side*—When a player hits the puck, any one of the same side who at the moment of such hitting is nearer the opponents' goal line is off-side, and may not touch the puck himself, or in any way whatever prevent any other player from doing so, until the puck has been played either by an opponent or by one of his own side who is nearer the opponents' goal than the off-side player. A player must always be on his own side of the puck.

9. *Playing, Charging, etc.*—The puck may be stopped, but not carried or played, by any part of the body. No player shall raise his stick above the shoulder. Charging from behind, tripping, collaring, kicking or cross-checking shall not be



allowed, and the referee shall rule off the ice for such time as he think proper a player who, in his opinion, has deliberately violated the above rule.

10. *Puck Off Ice*—When the puck goes off the ice behind the goal line, or a foul occurs behind the goal line, the puck shall be brought out by the referee from the point at which it left the ice to a point five yards in front of and at right angles to the goal line, and there faced. When the puck goes off the ice at the side, it shall be similarly faced three yards from the side.

11. *Goal-keeper*—The goal-keeper during play must not lie, kneel or sit upon the ice, but must maintain a standing position.

12. *Score*—A goal shall be scored when the puck has passed between the goal posts from in front, and below an imaginary line connecting the tops of the posts.

13. *Sticks*—Hockey sticks shall be made of wood, with no harder substance attached thereto, and shall not be more than three inches in width at any point.

14. *Puck*—The puck must be made of vulcanized rubber, one inch in thickness and three inches in diameter.

15. *Officials*—The captains of the contesting teams shall agree upon a referee, a timekeeper and two umpires. One of the latter shall be stationed behind either goal, which positions shall not be changed during a game, except by mutual consent of the captains.

16. *Referee*—All disputes on the ice shall be settled by the referee, and his decision shall be final.

17. *Umpires*—All questions as to goals shall be settled by the umpires, and their decisions shall be final.

## FENCING

IN THE opinion of many of the best fencers of the present day, the French school of Fencing is far superior to either the Italian or the German. Each of these, of course, has its advantages, but in this country the advocates of the French system far outnumber those of the two others. The Italian masters still cling to the long foil with a bell guard, and the Germans give preference to the saber, but the French, in accordance with the national character, have adopted a lighter and more supple weapon. In the following brief dissertation on the art of Fencing, reference will be made only to the French school.

It may be said of Fencing, that in no other pastime is the interest so intense, and in no other is the expenditure of muscular and mental exertion so nicely proportioned. The judgment, the eye, the nerves and the muscles—all are trained; suppleness, grace and ease of movement are acquired, and habits of courtesy and fairness are inculcated. Though in every sense a "gentleman's sport," fencing, unlike many of the other pastimes to which that term has been applied, is not beyond the reach of the poor. The outfit need not be expen-

sive, and even without the aid of a professional instructor, much may be learned about the art by practising according to the instructions contained in a good manual on the subject.

### THE OUTFIT

IN SELECTING foils, choose a pair that seem to be of the right weight for your strength; it will be best for the beginner to learn with very light weapons. See that each balances, when held with the blade supported by the finger an inch from the hilt. If not provided with good-sized metal buttons, the point of the foil should be wound with good, strong, waxed cord, so as to form a button nearly half an inch in diameter; this is a desirable precaution even when metal buttons are provided. The handle should be curved, and bound with twine. The masks should be strong and serviceable, and the wire should be finely meshed. As a matter of precaution against what might be serious injury, cheaply-made, wide-meshed masks should be avoided.

Ordinary, rubber-soled tennis shoes are often worn by amateur fencers, but the regulation French fencing shoes, which have broad, leather soles, are the best. The principal requirement is that the shoes shall not slip. Jackets should be made of leather, or other strong material, and well padded in front. The gloves should be loose, but not ungainly, and should be gauntlet-shaped, with stiff, patent-leather uppers.

### GENERAL INSTRUCTIONS

WHAT may be regarded as the first rule of Fencing should be strictly regarded by both beginners and experts: NEVER FENCE WITHOUT A MASK. To do so is always dangerous, and at once stamps a fencer as either ignorant or foolhardy.

There is no sport in which FORM counts more than in fencing, and for this reason, plenty of time and careful practice should be devoted to the mastery of the first principles, such as the proper holding of the foil, the position, etc. The fingers do all of the real work of foil play, the arm performing a subordinate part, and for this reason the manner of holding



(Fig. 1.)

the foil is most important. The concave of the handle should rest in the palm of the hand, and the thumb should be stretched along the convex, with the forefinger slightly in advance of the thumb. The foil

must be held lightly, but firmly, so that the point can be moved by simply moving the fingers. This position, which is the one generally employed,

and which may be recommended to the almost exclusive use of beginners, is called *supination*. (Fig. 1.) The position called *pronation* is assumed by reversing the hand so that the palm is turned downward. (Fig. 2.)



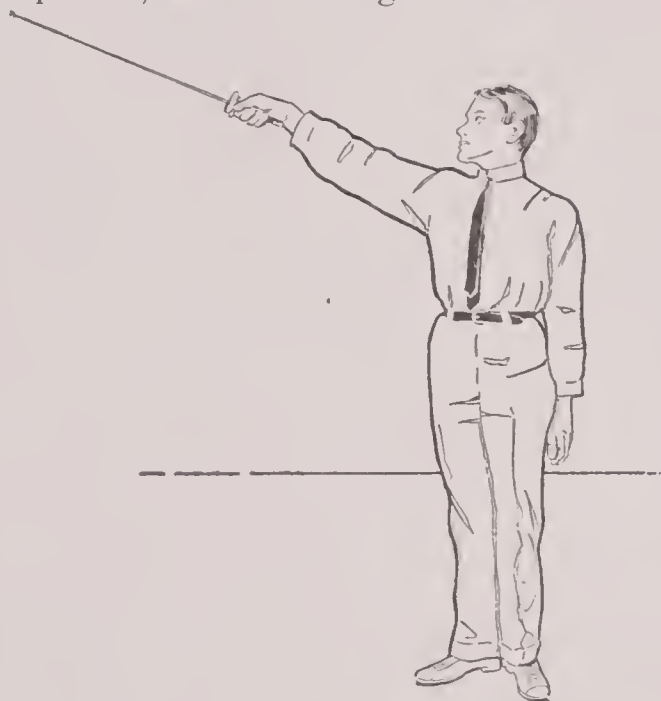
(Fig. 2.)



When preparing to get on guard, stand at *attention*, with the feet at right angles to each other, the head erect, the body erect and firm on the hips, without stiffness, and the shoulders thrown well back. The right arm holding the foil should be extended downward in front, so that the button on the point is about four inches from the floor; the left arm should hang naturally by the side. The position taken should be such that the right foot will point toward your opponent. Six movements are necessary in order to come on guard from the position of attention:—

1. Raise the right arm and the foil and extend them toward the adversary so that they shall form one continuous straight line, with the hand at the height of the eyes. (Fig. 3.)

2. Lower the foil naturally toward the left side, reverse the right hand, and when it is opposite the left hip place the back of the left hand on the blade, palm upward, with the fingers toward the guard and touching it.



(Fig. 3.)



(Fig. 4.)

3. Without altering the position of the hands, raise the arms above the head until they are fully extended, keeping the foil horizontal and as close to the body as possible as it rises.

4. Separate the arms, and carry the right hand forward and down to the level of the right breast, and about eight inches from it; the point should be at the height of the eyes, the forearm bent, the elbow in line with the right hip, and three inches directly in front of it. At the same time let the left arm fall back to a curved position with the hand slightly higher than the head.

5. Bend both legs, separating them at the knees without moving the feet. Keep the body well balanced on the hips.

6. Shift the weight of the body entirely to the left leg, advance the right foot about two feet to the front and let it fall in a direct line from the left heel to your opponent. (Fig. 4.)

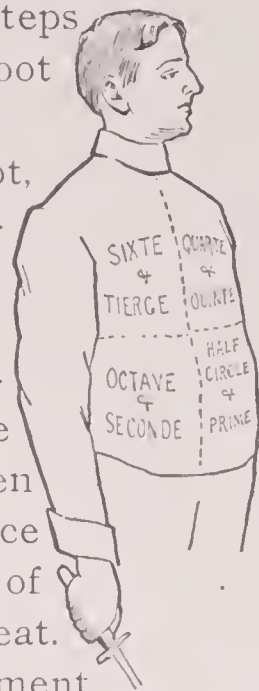
Having practised coming on guard until thoroughly acquainted with the different positions, the beginner should next learn to advance and retreat. To advance when on guard, take a short step (about twelve inches) forward with the right foot and let the left foot follow the same distance

directly after it, being careful not to alter the position of any other part of the body, or the foil. Practise taking several of these steps as quickly and easily as possible, and without raising either foot more than an inch from the floor.

To retreat, take a short step backward with the left foot, and follow it quickly with the right. Observe the same precautions about alteration of position and the height to which the feet are raised.

*Appels*, or *calls*, are given as an exercise to test the equilibrium of the body, and the execution requires that the weight be supported on the left leg. To make an *appel* when on guard, strike the ground lightly with the right foot twice in succession, without altering the position of any other part of the body. An *appel* should always accompany a step in retreat.

The beginner should now learn the different lines of engagement, which may readily be understood by supposing the front of the op-



ponent's jacket to be divided into four spaces. (Fig. 5.)

These indicate the respective points toward which the foil is directed in different attacks. The two upper spaces are called "high lines," and the two lower, "low lines."

The first high line, called the line of *sixte*, is the upper right-hand quarter of the body. An attack made in this line is called an *attack in sixte*,

and the parry is called a *parry of sixte*, if the hand is in supination, or a *parry of tierce* if in pronation. The other high line, called

the line of *quarte*, is the upper left-hand quarter of the body. An attack in this line is called

an *attack in quarte*, and the parry is called a *parry of quarte*, if the hand is in supination, or a *parry of quinte* if in pronation. The low lines, as indicated in the figure, are called, respectively, the *octave* or *seconde*, and the *half circle* or *prime*, according to the position of the hand.

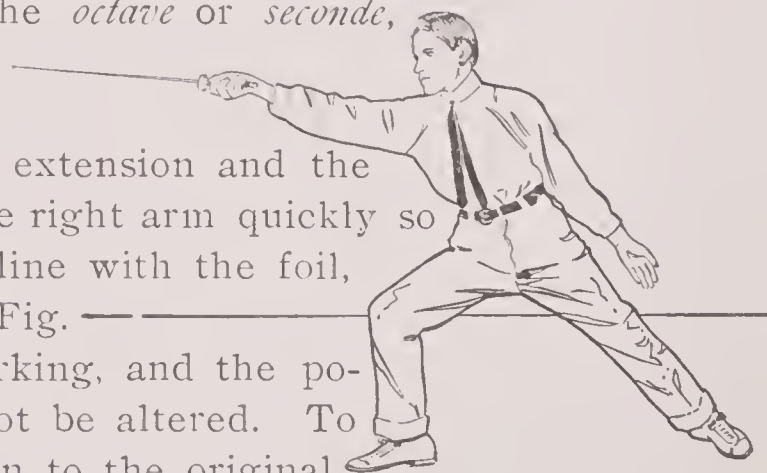
A full *lunge* is made in two movements—the extension and the lunge proper. To execute the former, extend the right arm quickly so that the arm shall be straight and shall form a line with the foil, the hand being at the height of the shoulder. (Fig. 6.)

The movement should be made without jerking, and the position of the other parts of the body should not be altered. To return to guard, simply bend the arm and return to the original position.

The beginner should practise the movement of extension until able to execute it quickly and easily, since on its perfect execution largely depends the success of the lunge. The lunge is executed as follows (Fig. 7.): Having extended the arm, quickly straighten the left leg, and at the same time carry the right foot as far forward as is possible without losing your



(Fig. 6).



(Fig. 7).



equilibrium, the foot grazing the floor as it advances and being planted firmly, with one appel. The left foot should remain in place, while the right should be at right angles to the left, with the right lower leg and thigh nearly or quite at right angles.

As the body moves forward, let the left arm fall straight to the rear until the hand is about three inches from the left leg, with the fingers extended and joined. The body should be held erect, the head thrown back, and the eyes fixed on the point of the foil. To return on guard, bend the left leg and throw the body back to its original position.

The movements of the lunge should first be executed slowly and separately, and afterward should be accelerated and combined so as to appear to form one movement. This should be practised many times each day until accuracy and precision are attained, and in this practice it is best to direct the point of the foil toward a leather target, or other similar object, secured against the wall at the height of a man's breast.

Special care should be taken to guard against the mistake, common to beginners, of throwing the right leg and body forward before extending the arm. You should also be careful not to step out too far with the right foot in lunging, and to keep the left foot flat on the floor.

The movement known as the *gain* adds to the length of the lunge and is especially valuable to short fencers. It consists in bringing the left foot slightly nearer the right when on guard, without otherwise altering the position of any part of the body. The movement should be made as stealthily as possible, and care should be taken to see that the body does not sway when its weight is shifted to the right leg.

The *recover* is the movement necessary to come from the position of guard to that of attention. It may be accomplished either by *closing to the front* or *closing to the rear*. In executing the former, the right arm is extended, the left hand lowered, and the legs straightened by drawing the heel of the left foot up against the heel of the right. In closing to the rear the only difference is that the right foot is drawn back against the left.

A *bout* is usually preceded by either a *salute* or a *grand salute*, both of which will be described further on. The two fencers then assume the position of guard simultaneously, standing so that the blades of their foils shall touch lightly, and at such a distance apart that each will be able to reach the other easily by a lunge. This distance, of course, varies with different fencers, as it depends largely upon the length of the foils used and the contestants' reach, and it can best be determined by trial.

The foils may first be engaged either in *sixte* or in *quarte*. If in the former, the right sides of the blades are touching; if in the latter, the left sides. The position of the foils should be as explained under *coming on guard* and the hand and point should be held so that the body is *covered*, or protected, in the line of the engagement; that is, so that the opponent could not touch your body with his point by a simple, straight lunge. This precaution should never be neglected, for unless particular attention is paid to it, beginners are apt to leave themselves *uncovered*, and thus are easily touched.

*Engagement*, or the *disengage*, is the act of crossing blades with your opponent in the opposite line to that in which you were first engaged. Thus, if at first engaged in *sixte*, you may change to *quarte* by executing an engagement. This is done by lowering your point and passing it under your opponent's blade to the opposite side, by moving the fingers only. Care must be taken that you are covered in the new line, and that your point is in line with the opponent's eyes.

As has been mentioned before, fingering is the most important part of foil play, and the beginner should often practise changing the position of the foil by the action of the fingers alone. The following exercise is recommended by a well-known fencer as calculated to promote accuracy and delicacy of touch:—

“Being on guard, throw the point of your foil toward the right by relaxing the grip of the last two fingers, but without moving the hand; then, by replacing these fingers, bring the blade back to its original position, at the same time giving your adversary's blade a sharp, but light, dry *beat*, or tap. This will have a tendency, if he hold his foil as lightly as he should, to throw his point off to the right, whereupon he executes the same beat upon your blade, and so on alternately. This capital exercise should be practised by two beginners for at least fifty or a hundred beats at a time, the greatest care being taken to use only the fingers in moving the foil.”

In order to achieve your object of placing your point upon your opponent's jacket between the belt and the collar, you may attack in either of two ways,—by a *primary attack*, consisting of a straight thrust, a feint and thrust, or some other maneuver in which you, yourself, take the initiative, or by a *secondary attack*, in which you wait for your opponent to attack, and then take advantage of an opening to return the attack. In carrying out any of these attacks the following rules should be kept constantly in mind:—

1. Straighten the arm before lunging, for a thrust made with a bent arm is almost sure to throw the point wide, and besides is very bad form.

2. Keep the hand up and the point down, to avoid leaving yourself open for a return attack, and to insure your foil bending up, instead of down, if you touch your opponent.

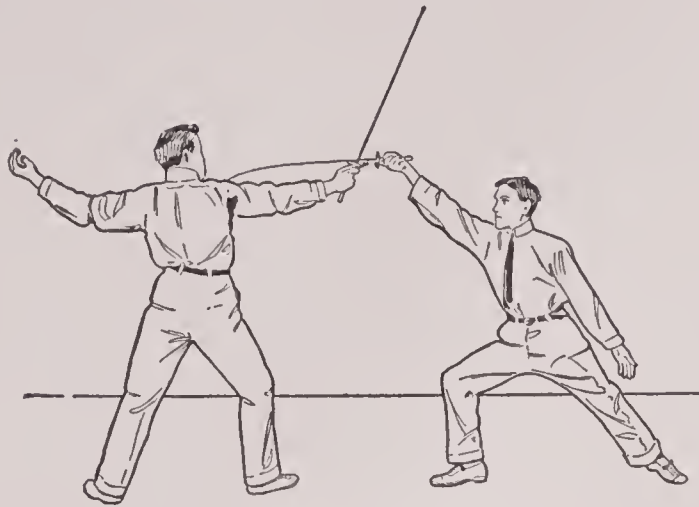
3. Always *oppose* toward your opponent's foil; that is, when you lunge, move the hand and foil into such a position that you are covered, and the opponent cannot reach you by a simple straight thrust. Thus, if when engaged in *tierce*, you drop your point and lunge at your opponent's right breast, you should carry your hand slightly to the right, as his blade is not on the right side of yours. If, however, you carry your hand to the left, you leave your whole body exposed, and when your opponent parries he will be able to touch you by simply straightening his arm.

### THE ATTACKS

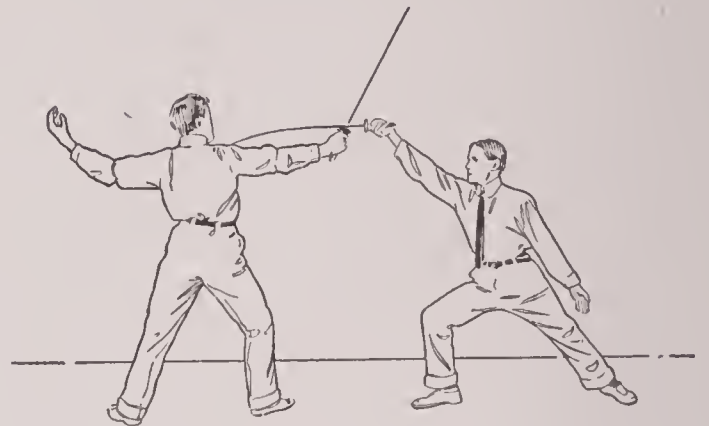
“*Primary attacks*” are divided into *simple*, *feint* and *force* attacks. “Simple” attacks, which are made with one movement, are four in number, and consist of the *direct lunge*, the *disengage*, the *counter-disengage* and the “*cut-over*.” The direct lunge, as has been explained, is used when the



adversary leaves himself open in the line in which he is engaged. A simple straight thrust may also be used on a feint by the opponent, or at the



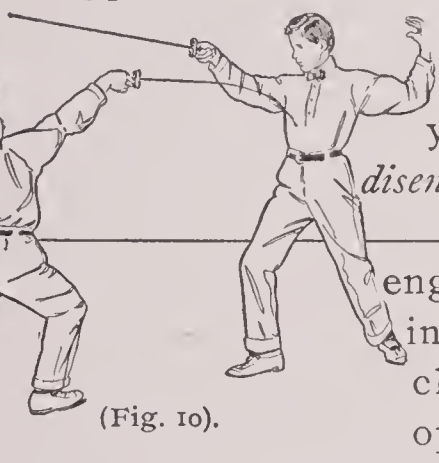
(Fig. 8).



(Fig. 9).

beginning of his attack, but it is then called a "*stop-thrust*," or "*time-thrust*," and is really a secondary attack.

The disengage, which has been described, consists in lunging in the line opposite that in which you are engaged. (Figs. 8, 9 and 10.) The disen-



(Fig. 10).

gage is often made use of when an opponent presses against your blade, either purposely, in order to cause you to leave yourself open, or unintentionally. A *counter-disengage* consists of a circular motion, followed by a quick lunge the instant the opponent changes the line of engagement. The effect of this maneuver is always a lunge in the same line in which you were engaged before a change was made. Thus, if when engaged in *sixte* your opponent makes a disengage, drop your point, and, fol-

lowing his blade around by a circular movement, lunge in *sixte*, being careful to oppose to the right. Two counter-disengages together are called a "*double-change*."



(Fig. 11.)



(Fig. 12.)

The "cut-over," or *coupe*, which is used to attack the adversary in the high lines, is really a form of *disengage*. It is executed by passing your

point over, never under, your adversary's blade, and lunging in the new line thus gained. (Figs. 11 and 12.)

The movement of raising the point should be made by using the fingers only, and not by altering the position of the arm.

The cut-over is difficult to parry, and is a dangerous attack when quickly and strongly executed. It can be changed instantly into either a parry or some other maneuver culminating in an attack of another kind. (Figs. 13 and 14.) The great danger with beginners is that they are likely to deliver a slap blow, and thus throw the point wide. In

order to avoid this, practise slowly at first, and be careful to keep the hand well up when lunging.

The "feint" attacks, which form the second group of primary attacks, consist of the "one-two," the "one-two-three," etc., and

the *double*. A *feint* which is really the same movement as an extension, is a false thrust

made to deceive the adversary into supposing it a real one. The arm is extended as in the ordinary lunge, but no

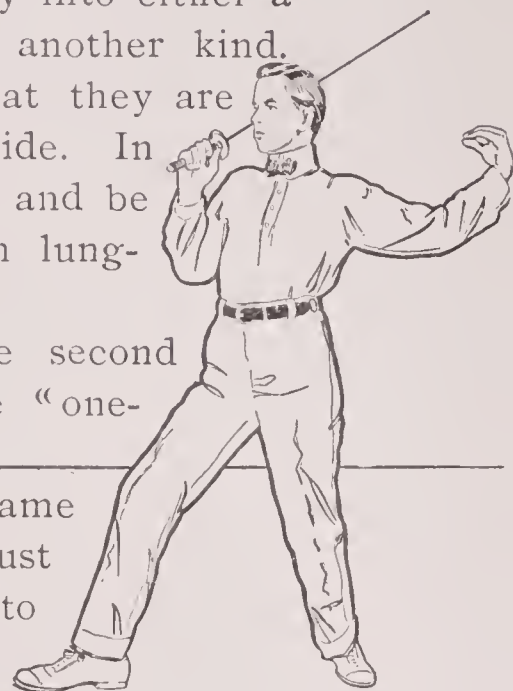
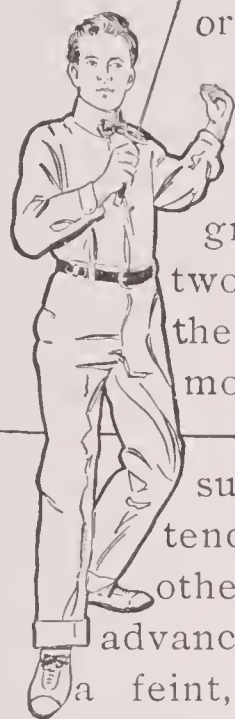
other part of the body is moved, except, perhaps, a slight advance of the right foot. (Figs. 15, 16 and 17.) In executing

a feint, the arm should be stretched well out and the point directed full at the adversary's breast, as otherwise he is not likely to be deceived by the movement. The foregoing description refers to the simple feint.

The "one-two" is a feint movement executed by making a false attack in one line and lunging in the original line of engagement. Thus, if you are engaged in *sixte*, drop your point under that of your opponent and extend the arm as if to lunge in *quarte*, but instead of completing the lunge, move your point back again the instant he parries, and lunge in *sixte*. The combinations possible for the "one-two" are numerous, as you may feint in any line and lunge in almost any other.

When proficient in the ordinary feints, you may attempt a feint or cut-over as a variation, though this is a difficult movement to execute. The "one-two-three" consists of two feints followed by a final lunge, really three movements. It is made by extending the arm and dropping the point under the opponent's blade to the opposite side, and under and back again to the original side on his parry. Thus, if engaged in *sixte*, feint first in *quarte*, then in *sixte*, and lunge in *quarte*. As in all feints, the movements should be as rapid as possible, and the foil play should be narrow.

The "double" is a combination of the disengage and the counter-disengage. It is impossible to execute the "one-two" if the opponent parries by a counter or circular parry (see description of parries), but you may yourself describe a circle with your point and obtain an opening for a lunge. Thus, if when engaged in *quarte* you feint in *tierce* and are met by the



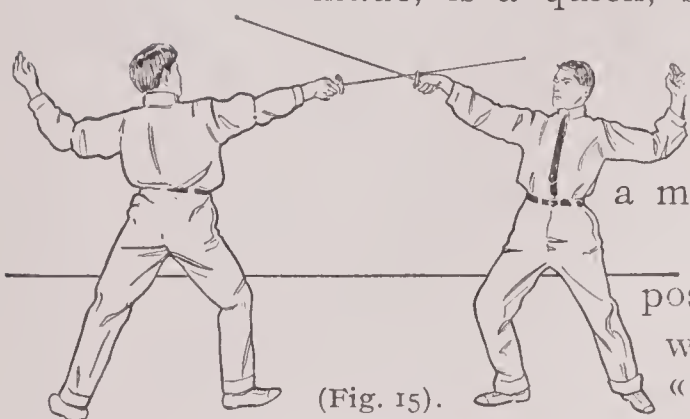
(Fig. 13).



*counter-of-quarte* parry, simply raise your point, circle around the opponent's blade again and lunge in *sixte*. This is a very useful form of attack, and if skilfully done, it may often be used to advantage. To check the double, execute a counter-disengage, followed by a simple parry; this will be found a good defense under almost all circumstances.

It will be seen from the foregoing that feint attacks are executed by avoiding the adversary's blade. "Force" attacks, on the contrary, depend upon its displacement. These consist of the *beat*, the *press*, the *glide* and the *bind*. The "beat," to which a slight reference has been

made, is a quick, sharp blow of your blade upon that of your opponent, for the purpose of making an opening for a lunge, which should immediately follow the beat.



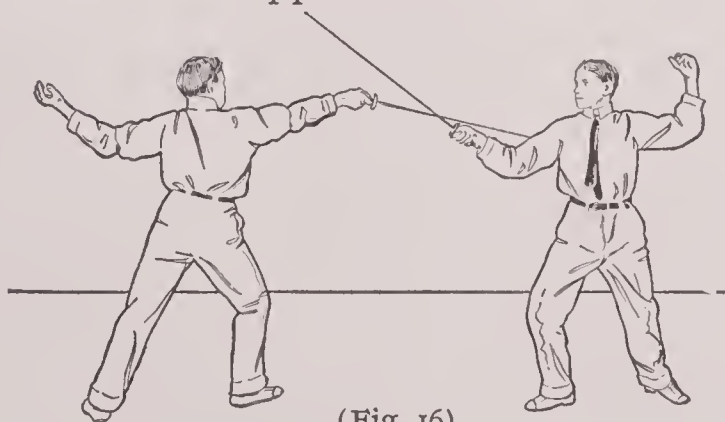
(Fig. 15).

Care must be taken that the stroke is made by a movement of the fingers only, and that it is sharp but "dry," that is, that your point returns to its original position, instead of following the opponent's blade as would be the case in a "push" blow. Since your

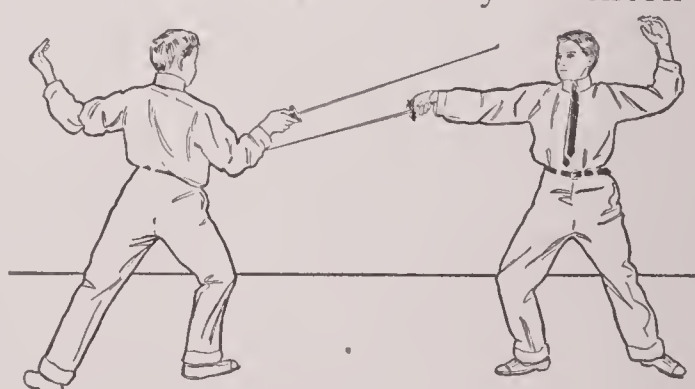
"beat" is often followed by a similar movement on the part of your adversary, it is well to execute a disengage on his return beat. Similarly, a beat may be met with a disengage. A *false beat* is a light blow of a similar kind made for the purpose of worrying the opponent or of drawing his attack.

In executing the *press*, which is similar to the beat, instead of striking the adversary's blade, give it a sudden pressure, just heavy enough to force it aside, and thus make an opening for your lunge. An extreme form of the "press," known as the *traverse*, is made by continuing the pressure and sliding your blade along the opponent's blade until you can force your point for a lunge.

The *glide* is really a light kind of traverse, and is used not so much to force the opponent's blade aside as to deceive him as to your inten-



(Fig. 16).



(Fig. 17).

tion, so as gradually to slide your point toward his hilt without his being aware that you are doing so. You thus secure a good opportunity for a disengage. The *bind* is executed by passing your point over the blade of your opponent and pressing it down into the opposite low line. Your forte, or thicker half of the blade, should be against his foible, or thinner half. The movement of forcing your opponent's blade from high *quarte* to low *sixte* is called *flanconade*. The bind is seldom used, and is not to be recommended to beginners, as it is difficult to execute and very risky.

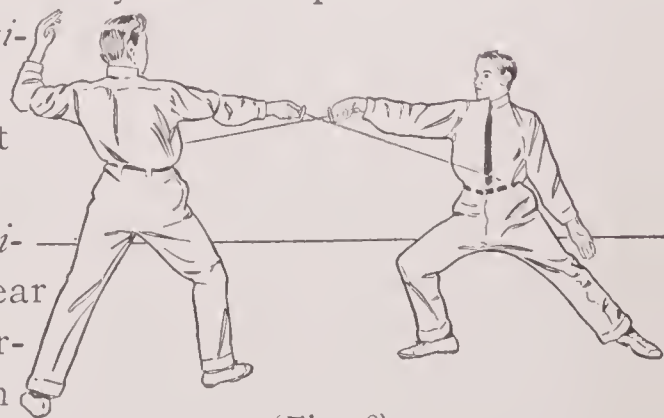
"Secondary attacks," as has been explained, follow some movement on the part of the adversary. They may be made when he begins to attack you, during his attack, or after it if it fails. The first of these, which is usually referred to as an "attack on the adversary's preparation" is made at the instant that you discover your opponent's intention to attack. Thus, instead of waiting for his direct lunge or disengage, you yourself take the initiative, and disengage, or execute some other movement preparatory to a lunge. Suppose, for instance, that he prefaces his attack with a "beat." Avoid the blow by dropping your point under his, and follow the movement with a lunge.

All these attacks on the adversary's preparation depend largely upon a fencer's judgment and the instinct which comes after long practice. The old fencer acquires a faculty of feeling by the touch of his adversary's blade what the latter is about to do. The foregoing attacks are really feasible only when the adversary's preparatory movements are slow enough to permit you to take advantage of them. If, however, you are slow in executing the attack, the result will be that both will lunge at once, and, as his attack was begun first, the advantage will be given to him, if he touches you; for the rules provide that he who is attacked must parry. Thus, if X lunges at Y and hits him fairly, and Y, instead of parrying, simply straightens his arm and hits X fairly, the point is given to X, for Y should have parried. On the other hand, if X's point goes wide, and Y touches, the point is given to Y.

Attacks made during the adversary's attack, which are known as *attacks on the development*, are undertaken in the midst of an attack upon you, and are usually *time attacks*. In the manner of their execution they differ from preparation attacks only in being begun a little later. One of the most common and successful of the attacks on the development is the "bind," which is made easier by the fact that the opponent is closer to you than when he is on guard.

Attacks on the completion, which are called *ripostes*, are undertaken when the adversary has attacked but failed to hit you. Thus, if when engaged in *quarte* he attacks you with the "one-two," lunging in *quarte*, and you parry successfully, the instant his point passes, straighten your arm and touch him before he has time to recover. (Fig. 18.) Naturally, as he is stretched forward for the lunge, his recovery will require some time, and if your parry is narrow and your *riposte* accurate, he is almost sure to be touched. A rule which is observed by all expert fencers is never to omit to *riposte* after the adversary's attack, if unsuccessful.

Care should be taken not to move the body in *riposting*, as your adversary is at this time very near you, and if you move forward you are likely to overreach, thus causing your *riposte* to fly wide. As soon as your opponent discovers that you *riposte* whenever his attack is unsuccessful, he is likely to become cautious, and then he will not lunge unless you give him a good opening.



(Fig. 18)



In case you are opposed to a fencer who always *ripostes*, keep your hand well up and strongly opposed on all lunges. If your lunge is parried and your adversary *ripostes*, recover as quickly as possible, at the same time parrying the *riposte*, and quickly lunge again; or, if you do not lunge, make a return *riposte*. This latter maneuver is known as a *counter-riposte*. A *riposte* may frequently be stopped by executing a quick *counter-parry* while getting back on guard after an unsuccessful lunge.

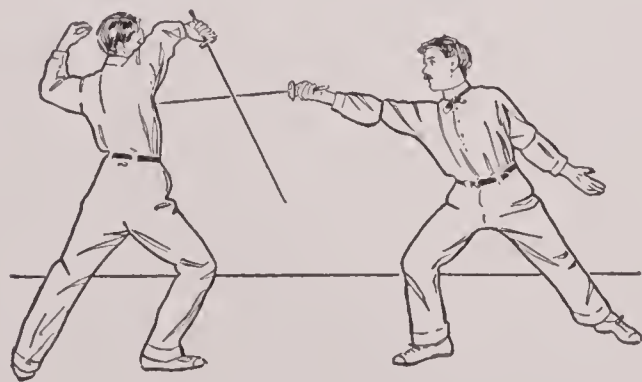
*False attacks* are not feints, but broader movements, intended to draw the opponent's attack, or sometimes to enable you to discover which is his favorite parry. Nearly all fencers become used to a particular style of parry, and in your first bout with an opponent it is a good plan to *take his measure* by means of a false attack.

There are many kinds of false attacks, such as straightening the arm, taking a step in advance, changing the line of engagement, or executing any other maneuver that will lead the adversary to believe you are attacking him. The faculty of distinguishing between a true and a false attack comes only with practice, and is largely a matter of judgment.

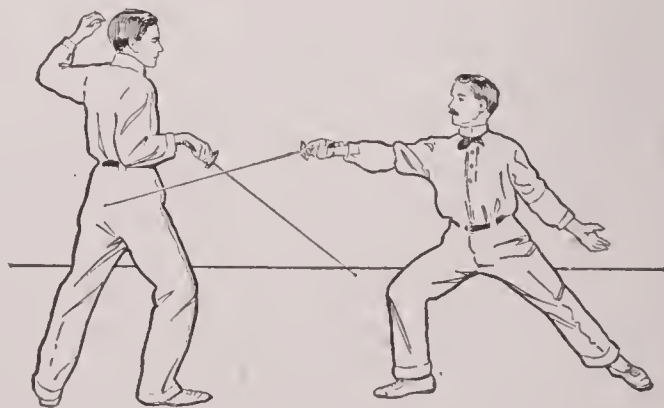
## THE PARRIES

THERE are two kinds of *parries*, known as the *simple parry*, in which the attack is opposed by a single movement, and the *counter-parry* in which a circle or series of circles is described with the point of the foil; the direction of these circles may be either to the right or to the left, and the point of the foil returns to its original position. The simple parries consist of the *prime*, *seconde*, *tierce*, *quarte*, *quinte*, *septime* or *half-circle*, and *octave*.

The *parry of prime* is executed as follows: Being on guard, turn the hand nails downward, at the same time moving it to a position opposite the left eye, and keeping the point directed toward the adversary's knee so as to receive the foible of his foil upon the forte of your own. (Fig. 19.) This parry is quickly executed, and is usually effective, since it covers all of the left side of the body; but it is somewhat difficult to execute, and the simpler parry of *quarte* is usually preferred to it.



(Fig. 19).

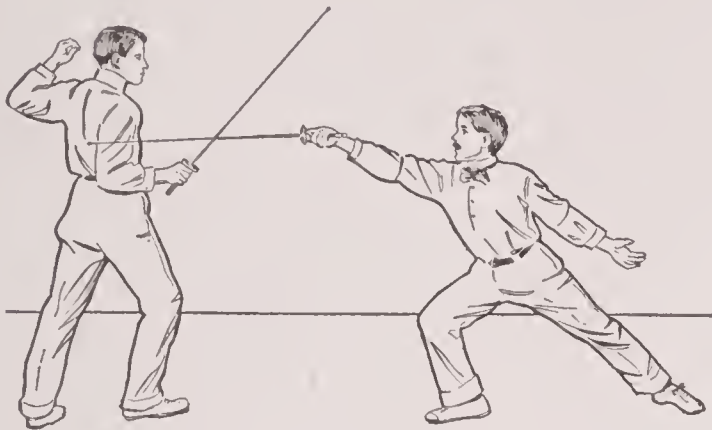


(Fig. 20).

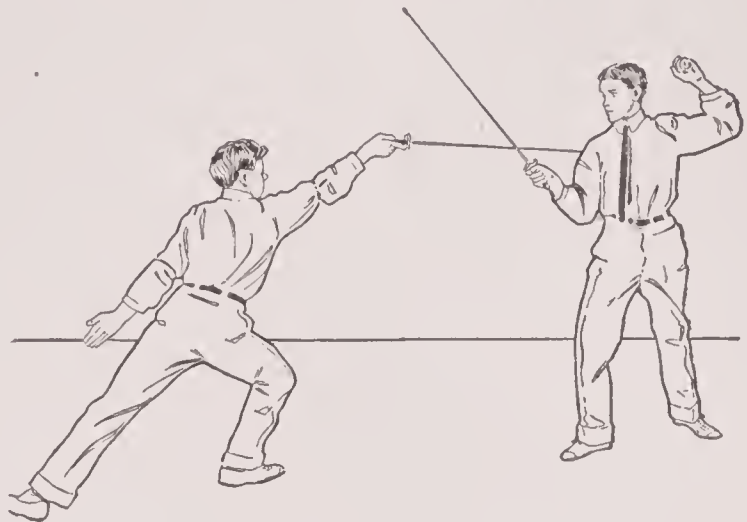
The *parry of seconde* is used to guard a lunge made by your adversary in the right lower line. It is executed by a slight, but very quick, downward movement of the hand, which is turned nails downward. (Fig. 20.)

The parry should be narrow, the hand being moved only enough to turn the attacking blade aside.

The *parry of tierce* is used to guard a thrust in the right upper line. It is executed by turning the hand nails downward and moving the hand slightly to the right, just enough to throw aside the attacking blade. (Fig. 21.) In making all parries, care should be taken that the point of the foil is kept directed toward the adversary, and is not allowed to fly out of position.



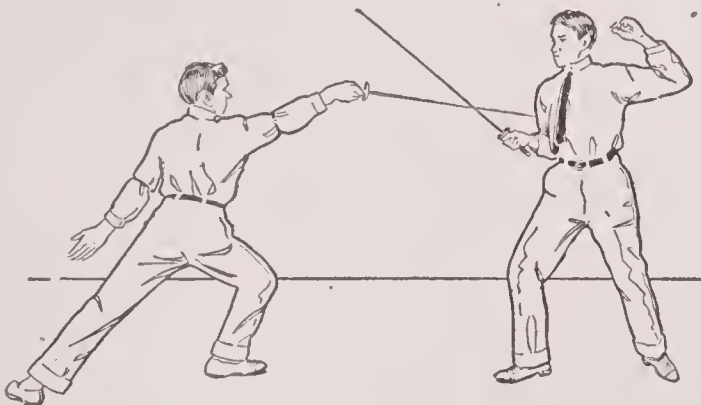
(Fig. 21.)



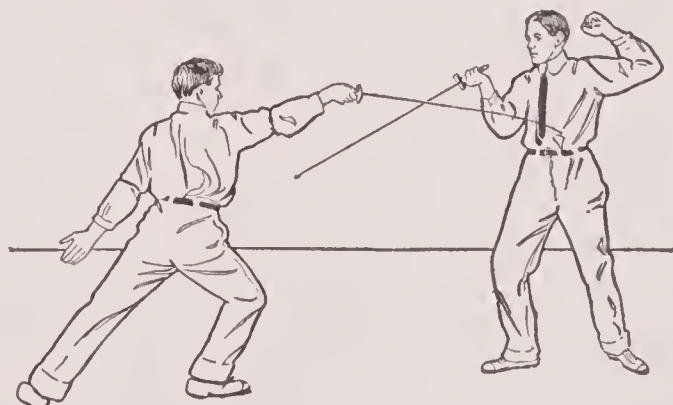
(Fig. 22.)

The *parry of quarte* is very important and is perhaps used more than any of the others. It is used to guard a thrust at the left side of the body, particularly in the high line. The hand is moved to the left until your forte encounters the foible of the adversary's foil and throws it aside. The thumb should be inclined slightly to the right, and, as explained before, the point should be kept directed toward the opponent. (Fig. 22.)

The *parry of quinte*, which is employed to guard a thrust in the left lower line, is executed by dropping the hand slightly toward the left from the position of *quarte* and changing the direction of the adversary's blade



(Fig. 23.)



(Fig. 24.)

by a light, dry tap. In executing this parry, the hand may be in the position either of supination or of pronation, though the latter is the more common.

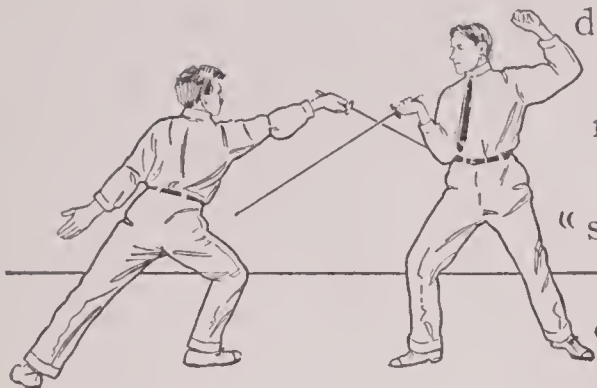
The *parry of sixte* is used as a guard for a lunge in the right upper line. It is executed by moving the hand far enough to the right to turn aside the adversary's blade. This parry is next in importance to that of *quarte*, and should be carefully learned. (Fig. 23.)

The *parry of septime*, like that of *quinte*, is employed to guard a lunge in the left lower line. It is executed by describing with the point of the foil a small semicircle downward and to the left, the hand at the same



time being moved to the left just enough to throw aside the attacking blade. (Fig. 24.)

The *parry of octave* is used to guard a lunge in the right lower line. It is executed by describing with the point of the foil a small semicircle downward toward the right, the hand at the same time being moved to the right just enough to oppose the opponent's blade. (Fig. 25.)



(Fig. 25.)

The beginner should be careful in executing all these "simple parries" to make them as narrow as is consistent with effectiveness. As has been said before, the point of the foil should be kept nearly or quite immovable, and the parry should be made entirely by the movement of the hand. But, at the same time, the movements of the hand should also be narrow, so as to avoid uncovering the body and giving the adversary opportunity for a return attack.

The foregoing simple parries are theoretically sufficient to guard any kind of lunge, but, practically, a counter-parry is often better, if not absolutely necessary. Thus, if the adversary feint at your left side, and dropping his point under your blade, lunges at the right, a counter-parry would be more efficacious than any form of simple parry.

Rondelle, the well-known authority on the foil and saber, defines the counter-parry as follows: "The counter is a circular parry, intended to seek the adverse blade in whatever quarter it may threaten you, and to direct it to the opposite quarter or line. In a counter, the point of your foil describes a small but complete circle, while your hand remains stationary." Each of the simple parries has its counter, which is made with the hand in the same position, and on the same side of the body, as in the case of the simple parry. It is unnecessary to describe all of these counter-parries, since they are so nearly alike, and reference will be made only to the execution of the four most important.

The *counter of quarte* is executed as follows: Being on guard in *quarte*, if the opponent thrust in *sixte*, follow his blade around by describing a small circle with the point of your foil, downward and to the right, then up over to the left, and back again to the same position in which your hand and foil were when you began the movement. (Fig. 26.) If the parry is executed quickly and smoothly enough to be successful, you will still be engaged with the adversary in *quarte*, his blade having been caught and forced across your body out of the line in which he thrust. In this parry, as in all of the counter-parries, the circle should be made as narrow as possible.

The *counter of septime*, or half circle, is executed as follows: Being on guard in *septime*, when your adversary thrusts, make the circular parry by raising your point over his to the right and passing it back, under, to the left. (Fig. 27.)

To execute the *counter of sixte*, being engaged in *sixte*, if your adversary drop his point and thrust in high *quarte*, lower your point and describe a small circle from right to left. (Fig. 28.)

To execute the *counter of octave*, being on guard in *octave*, if your adversary thrust in low *quarte*, describe a small circle, beginning the movement from right to left. (Fig. 29.)

All of the parries, with the possible exception of the *primé*, which is little used, should be practiced continually, both in order to become proficient in their execution and to toughen and strengthen the wrist. In addition to the foregoing, there are numerous complex parries, which,



(Fig. 26.)



(Fig. 27.)



(Fig. 28.)

however, are really only combinations of two or more simple parries, and need not be described here. Their use depends largely on the fencer's judgment and practice to enable him to select those which he finds most effective under certain conditions.

Reference was made at the beginning of this article to the fact that a bout is always prefaced with either a simple salute or a grand salute. A simple salute is executed by standing at the position of attention and carrying the right hand to a position directly in front of the throat, the blade being held vertically before the face, the hilt near the chin and the knuckles outward, then lowering and extending the arm, knuckles down, until the point is about four inches from the floor, and a little to the right of the body.

A formal bout is usually preceded by the grand salute, which is executed both as a matter of courtesy and in order to prepare the combatants for their work and to give them confidence. It will be difficult for the beginner to become proficient in this maneuver without personal instruction, but a clear understanding of it may be obtained from the following description by a prominent English fencer:—

"The two opponents come forward equipped in all respects for the assault, with the exception of the masks, which they carry in the left hand, and place on the ground beside them on the left.

"Then, standing face to face, foil in hand, just out of lunging range of the one with the longer reach, the two opponents assume the preliminary position, and thence proceed to the position of guard, engaging their blades in *quarte*, foible to foible, before advancing the right foot.



(Fig. 29.)



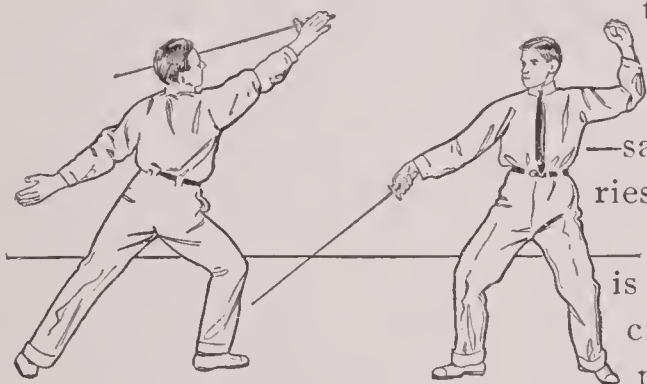
"Thereupon, one of the two, either the more honorable or the one chosen by agreement beforehand, proceeds to measure the distance between himself and his opponent, while the other goes back to the preliminary position in order to leave the way open.

"The one who is selected to open the attack takes distance in the following manner: First, he comes to the upright position, then straightens his arm with the hand well raised and in 'supination,' and then lunges out so as to bring his point close up to the defender's breast, but without touching it.

"After taking distance, the assailant resumes the upright position and draws the hilt of his foil close to and on a level with his mouth, the point directed straight upward. The defender, watching his actions, lowers the hilt of his foil so as to take up a like position at the same time.

"Then both together proceed to salute, first to the left, then to the right as follows: They begin by showing the *parry of quarte*, carrying hand, arm and point farther over to the left than in the ordinary way of forming the parry, so as to emphasize the movement; then, on the return from the parry, they bring the hand back on a level with the mouth, and, changing the hand into 'pronation' by a turn of the wrist, show the *parry of tierce* in a like pronounced manner.

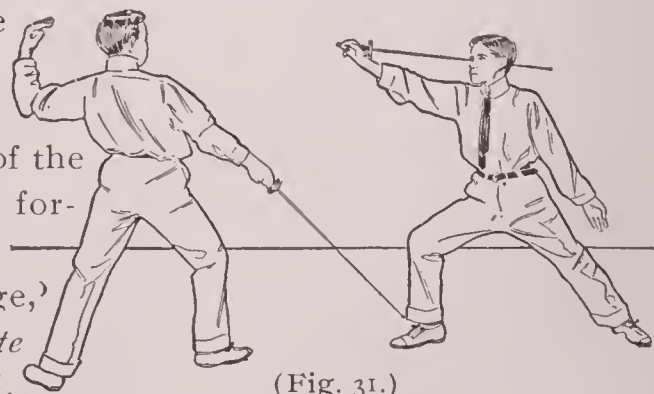
"After this both of the opponents go through the movements necessary to bring them from the 'pronation' position to that of guard, as before, crossing the blades before advancing the right foot. The assailant then proceeds to execute a series of *disengages*—say four—to which the defender offers the corresponding parries.



(Fig. 30.)

"Thus the assailant disengages into *sixte*, and, as the arm is straightened in that line, the defender parries *tierce* with a crisp tap, taking care not to harsh his blade. On feeling the parry, the assailant smartly reverses his foil, turning the point toward, and so as to pass close beside, his left ear, the hilt resting on the back of the hand, and the grip being held by the thumb and first finger only, while the other fingers are ranged beneath the first; he then lunges in with the pommel directed toward the defender, whom he keeps in view by carrying his hand far enough to the left to leave an opening between arm and blade. (Fig. 30.)

"In order to make way for the 'lunge,' the defender drops his point from the *parry of tierce* so as to show the *parry of octave*, only carrying the point far enough across the body of the assailant to avoid hitting him on the move forward.



(Fig. 31.)

"On the assailant's recovery from the 'lunge,' the defender executes the engagement of *sixte* or *tierce*. Again the assailant disengages, and, on the *parry of quarte* by the defender, reverses his foil as before, but directs the point toward, and clear of, his right ear, and lunging in with the pommel toward the defender, his hand is carried far enough to the right to enable the assailant to see him between blade and arm. (Fig. 31.)

"Here, to make way for the 'lunge,' the defender shows the *parry of septime*, carrying the point across the body of the assailant to the other side. The remaining *disengages* are given and received with a repetition of the same movements as in the first two *disengages*. In delivering the first and last 'lunges,' the assailant dwells a little time; but he passes the intermediate *disengages* as fast as possible.

"On recovering from the last 'lunge,' the assailant shows a 'one-two' without lunging and the defender shows the *parry of tierce*, so that on this occasion, the blades do not come in contact; they both then resume the upright position, the assailant raising his point as in the preliminary position, and the defender proceeding to imitate in all respects the actions of the assailant taking distance.

"This done, the former defender becomes in his turn the assailant, and the latter now assumes the character of defender, each of them going through the same movements as his predecessor in the past, saluting in *quarte* and *tierce*, 'disengaging' and 'parrying' as before laid down.

"On the 'feint one-two' of the now assailant, both opponents resume the upright position and fall on guard, not in the usual way, but with a backward movement of the left foot about twice its own length, and with the hand in the position of *tierce*.

"Next they both beat twice with the right foot, resume the upright position by bringing the left heel up to the right, and salute in *quarte* and *tierce*.

"In conclusion, both opponents come on guard as from the preliminary position, beat twice with the right foot, bring the left heel to the right, and salute each other by carrying the hilt up to a level with the mouth, the point directed upward, and then lowering hand and point to the position of *seconde*."

All Fencing contests in this country are governed by the following rules:—

#### FENCING RULES OF THE AMATEUR FENCERS' LEAGUE OF AMERICA

1. The competition shall be conducted by a jury of three or five experienced fencers, for each bout, who shall select a referee from among their number, and his decisions shall be final and without appeal.

2. The English language only shall be spoken by the judges during the competition.

3. At the command of any of the judges, contestants must take the first position and lower their weapons.

4. Each contestant shall fence a bout with every other contestant.

5. Each bout shall be for an aggregate of five (5) touches, each touch to count one point.

6. Each judge, without consulting his fellow-judges, may award to each contestant in the bout a maximum of .50 of a point of defense, .50 of a point of attack and .50 of a point of general good form or any part thereof. The award shall be determined by the average of the points thus allowed by the judges. This method of judging is based upon the idea that the contest is intended as an exhibition of skill, as well as of the securing of touches.

7. Touches shall count only when made upon the body, within the limits bounded by the collar of the fencing jacket, the median line, the hip, and a line drawn from the hip to the posterior limit of the armpit, around the front of the arm and along the crest of the shoulder to the collar. A touch on any of the boundary lines shall count.

8. Whenever a touch is made outside the limits, and it is evident to the judges that it would have been good if the adversary had not made an illegitimate movement, it shall count. An illegitimate movement is one by which the adversary seeks



to avoid a touch within the limits prescribed, by purposely presenting some other part of his body to the point.

9. A touch is of no value when the point is twisted into position on the body after the slap of the foil.

10. A touch, whether fair or foul, invalidates the *riposte*.

11. The competitor attacked should parry; if a stop thrust be made, it shall only count in favor of the giver, provided it be perceptibly in advance of the touch made by the attacking party. If both be touched simultaneously, the count shall be credited to the one who lunged. If both lunged, neither counts.

12. The judges must stop a *corps-a-corps* as soon as made.

13. A disarmament is of no value. A touch immediately following a disarmament, counts.

14. Each contestant shall fence with the same hand throughout the bout.

15. The contestant scoring the highest aggregate of points shall be declared the winner, the next highest second, and so on.

16. A point scored from a thrust started with the elbow behind the body (jab thrusts) shall not count.

17. Each competitor shall wear a dark fencing suit, so that the white chalk marks can easily be seen.

18. Contestants shall fence within a marked space twenty feet in length and thirty-six inches in width. Should any part of a contestant's foot extend beyond the boundary line, .50 point shall be deducted from his final score for each offense. When a contestant oversteps a boundary line, the judges shall stop the bout and start the contestants again in the middle of the marked space.

19. Foil blades shall not be more than thirty-four inches in length.

## BOXING

CONSIDERED simply as a physical and mental exercise, Boxing is an interesting and beneficial form of athletic sport. As a desirable accomplishment, it may be compared to swimming, since proficiency in it may some day enable one to protect himself and others from physical danger. The statement, sometimes made, that Boxing is unqualifiedly brutal, lacks confirmation, if we except, as the majority of us do, its relation to the prize ring. Almost any athletic sport may be made brutal by those who participate in it, but in Boxing, as in other sports, the element of brutality may easily be eliminated.

Observation will demonstrate to any unprejudiced mind that in the vast majority of cases physical prowess, derived largely from scientific exercise, is conducive to forbearance and evenness of temper. Good boxers are seldom irritable or quarrelsome, and the qualities of temperance and self-control are nearly always found to have been cultivated in them.

Besides benefiting one's mental and moral nature in the ways referred to, there is perhaps no form of exercise that will more surely cultivate quickness of thought and action, combined with grace, agility and strength of body. It is well to consider that Boxing necessitates an unusual amount of physical exertion, and that for this reason the beginner should be careful not to devote too much time to the exercise at first, and to stop for rest whenever necessary.

One who is not reasonably strong, or who has not been used to exercise, will find his improvement in Boxing much more rapid if, before taking it up, he will cultivate a fair amount of strength and endurance by means of some lighter form of exercise, such as running, or the use of pulley-weights, dumb bells or Indian clubs.

Many teachers of physical training hold that Boxing necessitates too great exertion to make it beneficial for women of ordinary strength, and this is doubtless true. The fact remains, however, that, especially in gymnasiums and among women who have had other athletic training, this has been found an invigorating and healthful kind of exercise.

#### INSTRUCTIONS FOR BEGINNERS

THE first requisite is a set of good Boxing gloves. The beginner should be careful to select gloves made of soft, smooth leather, and so padded as not to be hard or lumpy. The weight should be about eight ounces. When possible, the room or space used for Boxing should be twenty or more feet square, and should be entirely free from obstructions of any kind. Boxers are sometimes badly injured by coming in contact with chairs or other articles of furniture, or with some piece of gymnasium apparatus.

When not Boxing with an instructor, select an opponent who is as nearly as possible your own size and weight. Under no circumstances box with a person who is not even-tempered and companionable, or who is likely to be unnecessarily rough. Remember that in all sports the best way to acquire proficiency is to choose for your opponents those who are more expert than yourself. This is especially applicable to Boxing, since a good boxer is less likely to deliver a hard chance blow, or to lead you to develop faults, than is one who is a beginner like yourself.

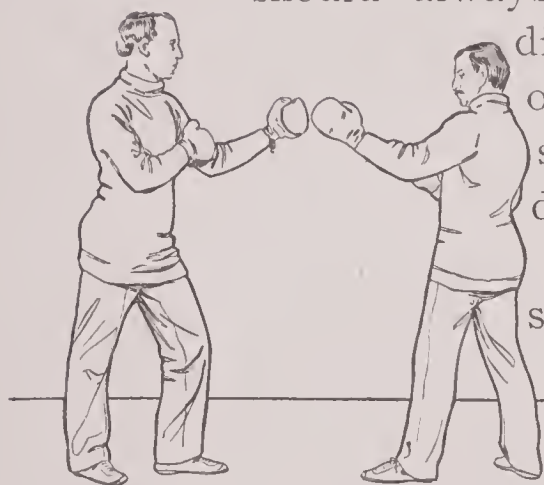
There are many faults that are natural with beginners, and which should be carefully avoided. Keep your eyes open and your mouth closed. Do not bite your lips or put your tongue between your teeth. Never slap at your opponent, but deliver your blows with the back of the glove, and keep your hands nearly closed. Endeavor to have your hand reach its mark in the straightest possible line, and



to have the thought and the delivery of the blow almost simultaneous. Give the full reach of your arm to each blow and do not draw back before you have "landed" in order to avoid a return blow, or *counter*. Do not hit below the "belt," that is, below your opponent's waist line.

The movement of all parts of the body should be light, easy and graceful. Do not keep the muscles of the arms flexed, but stiffen them just before the blow reaches its mark. Make each movement as quickly as is consistent with its proper and effective execution. The body should not be rigid, but should be flexible and kept in perfect control. This will enable you to give to each blow the weight of your body, which will make it more effective than if you had depended solely upon the strength of your arm.

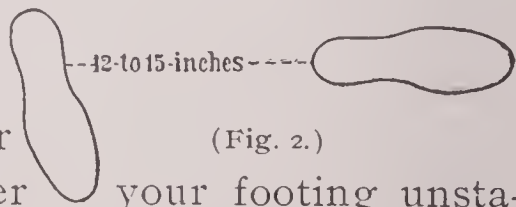
The head should be turned slightly to the right with the chin drawn well in. The neck muscles should be kept flexible, and you should always be prepared to "duck" both head and body in any direction desired. Always look directly into your antagonist's eyes, and endeavor to control your facial expression so as not to indicate to him when you intend to deliver a blow, or what direction it will take.



(Fig. 1.)

In assuming the position of the boxer (Fig. 1:) stand with your left foot flat on the floor in advance of the right and in a straight line with your opponent. The right foot should be to the rear and slightly to the right of the left, with the heel just clear of the floor. The angle between the two feet should be about forty-five degrees, as shown in the accompanying diagram. (Fig. 2.)

Always keep the left foot in a straight line with your antagonist—do not permit the heel to move to the left, as it will have a tendency to do. This fault, if not corrected, will cause you to deliver ineffective, glancing blows, and will render your footing unstable. The distance between the feet should be between twelve and fifteen inches, but this is left largely to the judgment of the boxer.



(Fig. 2.)

A tall man will, of course, require more distance than a short man, and each person should select the position that is easiest for him and that at the same time is reasonably stable. Both knees should be slightly bent, and the leg muscles should be kept constantly at a tension that will permit you to advance or retreat, or to step to one side or the other, quickly and easily.

Special attention should be given to the foot movements, since they are even more important than the manner of using the arms and hands. To advance, move the left foot forward about ten inches

and follow with the right. To retreat slowly, move the right foot about the same distance to the rear, and follow with the left.

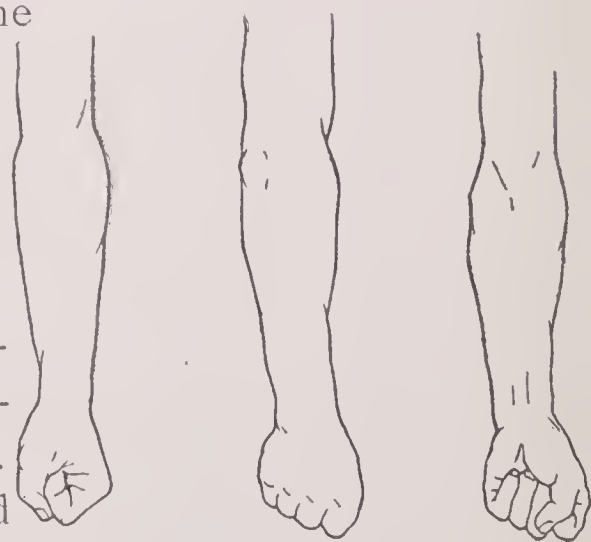
To move back quickly after delivering a blow, or in order to avoid one, which is termed "breaking distance," spring back lightly from both feet, keeping them as close to the floor as is possible without dragging them. To step to the right, move the left foot first and follow with the right. To step to the left, move the right foot first and follow with the left. These movements should be practised until they can be made easily and naturally.

The left arm should be half extended, with the hand on a line with your opponent's chin, and the knuckles to the left. The right arm is held easily across the body with the knuckles to the front, so as to guard the pit of the stomach and the kidneys.

After assuming the position of the boxer, you will next be called upon to judge the striking distance between yourself and your adversary. A good way for beginners to learn to do this is as follows: Both you and your opponent should extend your left arms toward each other, keeping the hands in line with the shoulders, and move closer together or farther apart until your left gloves just overlap. If you now assume the position of the boxer, you will be in good striking distance. It is hardly necessary to state that this is done only by beginners and in practice, and should be continued only until the eyes become accustomed to estimating the distance.

In boxing, move continuously around your adversary, generally to the right, keeping your left hand and foot in advance. After you have delivered the blow, this movement to the right will carry you away from the right-hand return blow, or counter. A slight backward and forward movement of the hands is often confusing to an opponent, and will be found of value in other ways. The common tendency to overdo this should be avoided, since when overdone it is useless and awkward. The position of the striking hand in delivering the different blows should be as shown in Figure 3.

A feint is executed by pretending to strike at one part of the opponent's body and, instead, striking at another, or by making some movement to draw any particular blow for which you are prepared to counter. Thus, you may feint by drawing back the right hand and advancing the left foot, then making a quick movement as if to strike with the left hand at the head and delivering the blow with the right; or by pretending to lead with the left hand for the face, and ducking and striking for the body with the other hand.



(Fig. 3.)

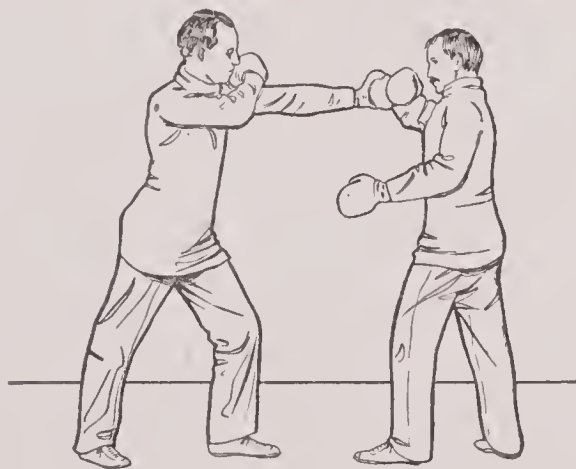


A feint may also be executed by shifting the eyes from the opponent's face to his waist or feet and striking at his face, or by a sudden start forward as if to strike, a stop, and immediately afterward a genuine blow.

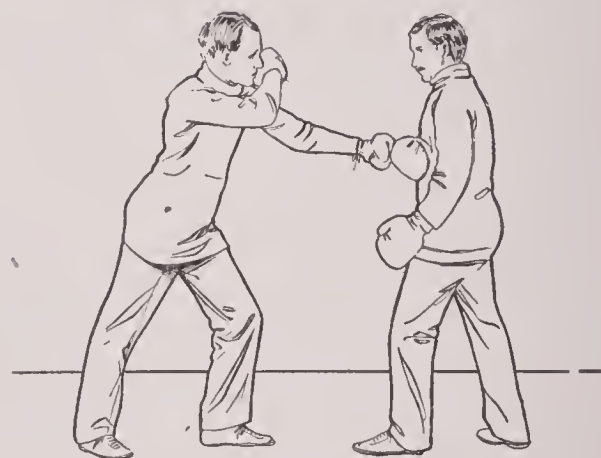
We may now take up in their order the four principal blows used by modern boxers in learning. They are as follows: (1) Left hand blow, or lead, at the face; (2) Left hand lead at the body; (3) Right hand lead at the face; (4) Right hand lead at the body.

In delivering any one of these blows, you should step forward on the ball of the left foot, keeping the right in its original position and bending the left knee slightly. At the same time, incline the body forward, *but not beyond the line of the left knee*. You thus add the weight of the body to the blow, which greatly increases its force. From this position you are prepared to break distance and thus to lessen the danger of a return blow. The shoulder should be thrown well forward with the arms, so that you will get the advantage of your full reach.

In making a left hand lead for the face (Fig. 4), step forward with the left foot, at the same time striking with the left hand for your



(Fig. 4.)



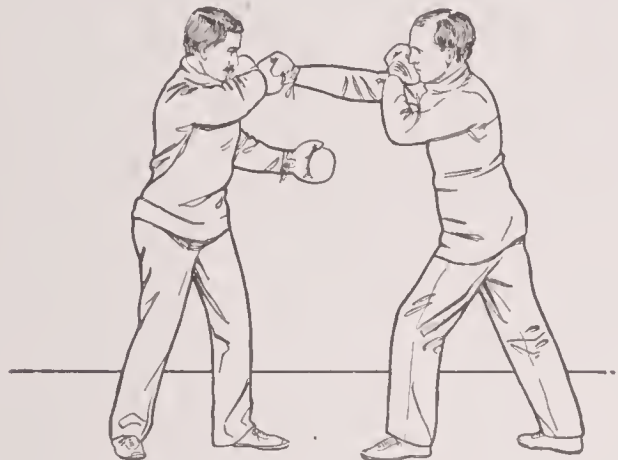
(Fig. 5.)

adversary's face, the right hand taking the position of guard for your head. This latter movement consists of raising the right arm so that the elbow and glove are in the same horizontal plane, the elbow protecting the right, and the gloved hand the left, side of the face, and the forearm taking care of the face itself. You are now protected from a return attack, whether it is by means of a swinging or a straight blow. The body, as may be seen in the cut, is inclined forward and presents a slanting surface to the opponent, thus lessening the chances of his blow landing fairly, in case he should counter for the body.

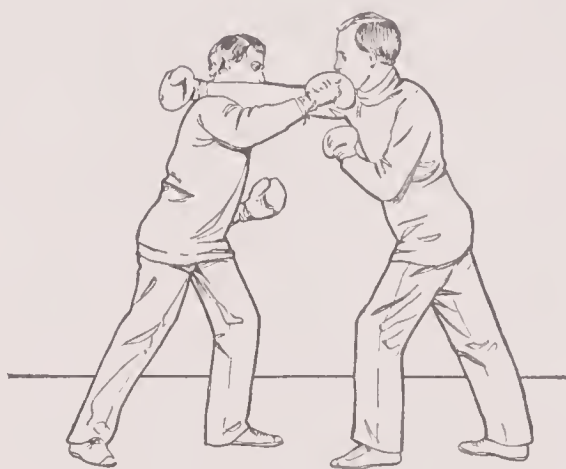
After delivering your blow, whether it lands or is blocked, immediately break distance and return to the position of the boxer. A quick recovery after a blow is one of the prime requisites of good Boxing. In again coming within striking distance, advance the left foot and

follow it with the right, bearing in mind always to keep sufficient distance between the feet. Advance very slowly and cautiously toward your opponent, until you are satisfied that you are close enough to deliver your next blow.

In making a left hand lead for the body (Fig. 5) the preliminary position is the same as in the preceding blow, but your objective point is the pit of the stomach instead of the face. As before, the right hand is raised to the position of guard for the head. When this lead is made, the face is the only possible place on which the opponent



(Fig. 6.)



(Fig. 7.)

may counter, so care should be taken that your guard is firm. Just before the blow lands, turn the hand slightly to the right so that the nails will be down and the knuckles up (Fig. 3); this insures a perfectly straight blow. Break distance as before and recover as quickly as you can.

It is well to precede this blow with a right-hand feint, to induce your opponent to throw up his left hand and thus expose his stomach. Duck to the right when you lead, and, in stepping in, cover twice the distance of an ordinary step.

A right-hand lead for the face (Fig. 6) is likely to be successful only when the opponent holds his left hand too low when on guard. Step in with the left foot, duck to the left, and strike for the face with the right hand, being careful to throw the shoulder well forward.

The left hand takes the position of guard for the head. The back of the right hand is turned up just before the blow lands. (Fig. 4) The right-hand lead for the body (Fig. 7) is similar to the above blow, except that the body is inclined slightly more forward, to give full reach to the right arm as it is straightened out in attempting to reach the pit of the stomach.

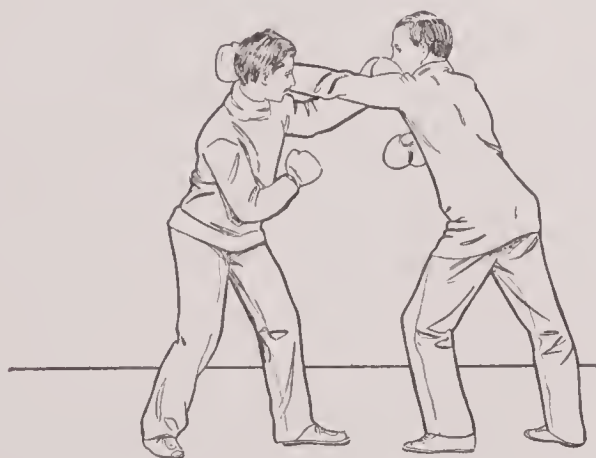
The movement of the body in these right-hand blows is from right to left, but it should be made from the waist line only. In advancing the left foot, it should be kept pointed straight to the front, in both right-hand and left-hand blows. If, by some mistaken movement, you should get the right foot directly behind the left, instead of to



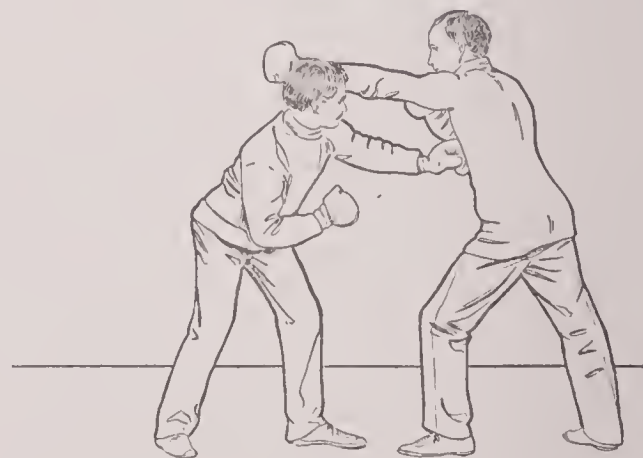
the right of it, where it should be, you will find on attempting a right-hand lead that you will be likely to lose your balance. Always try to keep these facts in mind when leading, and never forget that each lead is likely to be followed by counter blows from your opponent.

It does not always follow, however, that you must guard your head when leading for your adversary's face,—you must depend upon your judgment in deciding whether it is best to guard your head or your body, and practice will teach you to know intuitively your opponent's intentions. But in leading for the body, you should always guard your head, for, as has been explained, that is the only possible point on which a counter would be effective, your body being too far away and inclined at too great an angle to render a return blow dangerous to it.

The counters, or blows that are likely to be struck to offset leads, may best be understood and explained by dividing them into series. For example, should your opponent lead with his left hand for your face, you have the option of any one of five possible counters. The first of these is a left-hand counter for the face (Fig. 8) which is perhaps the most natural of all. When your opponent leads, duck your head quickly to the right, at the same time striking with your left hand for his face, and stepping forward, as if executing a lead. His



(Fig. 8.)

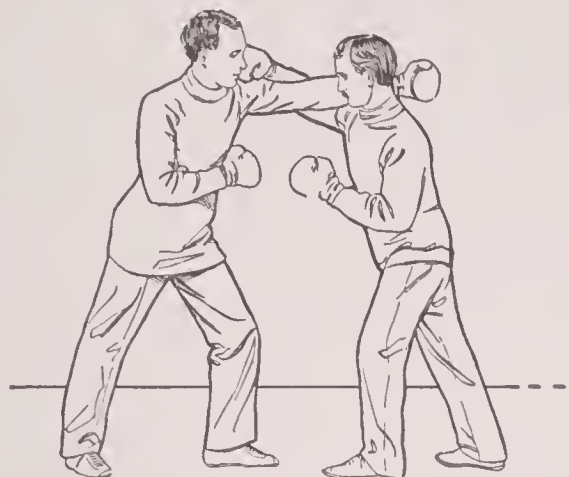


(Fig. 9.)

blow will thus miss your face, and, on account of your duck to the right, will pass between your head and left shoulder. This counter, if successful, is a very strong and effective blow, as it catches the opponent while coming forward on his lead, and thus his forward impetus is added to the strength of your own blow.

The left-hand counter for the body (Fig. 9) is executed in the same manner as the above blow, with the exception that you duck lower in order to bring you in a better line with the adversary's body. This counter is especially valuable if your opponent is taller than yourself, as in that event you are more likely to reach his body than his head.

The right-hand cross-counter (Fig. 10), if carefully executed, is a good return for a left-hand lead for the head. As the opponent's glove comes toward you, duck well to the left, allowing the blow to pass between your head and right shoulder; cross your opponent's incoming left hand with your right arm, and, bending it slightly, strike at the point of his jaw. Care must be taken that your arm is held



(Fig. 10.)

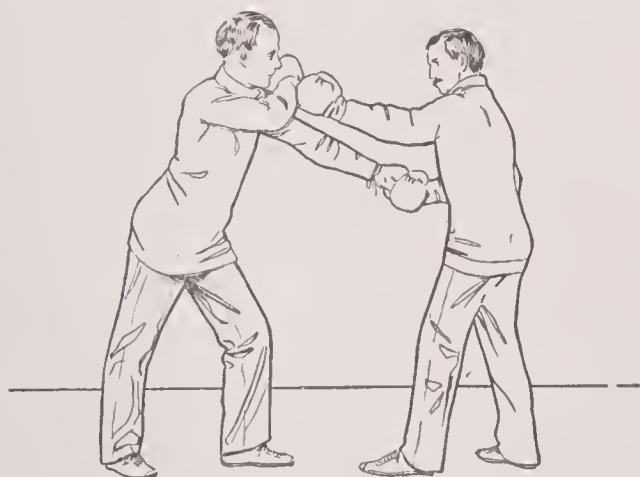


(Fig. 11.)

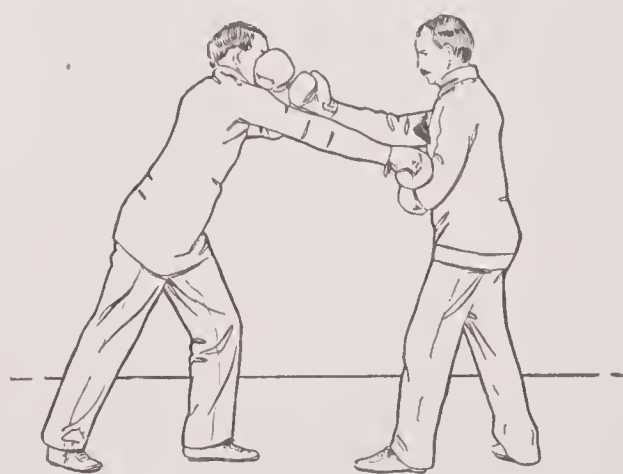
slightly crooked, so as not to interfere with his lead and divert his hand toward your face. Reference to the illustration will show that the effect of this would be to offset the result of your duck. The right-hand counter for the body is similar to the foregoing, except that the blow is landed on the body and the right arm passes under instead of over the opponent's left.

The right-hand upper-cut (Fig. 11) is a counter which, though sometimes used, is not as common as the other return blows that have been described. Step in as if to execute a right-hand cross-counter, but lean to the left instead, and strike upward, with the arm bent at the elbow, your glove passing inside the lead.

The left and right on side step is the sixth possible counter on the lead for the face, and has the distinction of being the only



(Fig. 12.)



(Fig. 13.)

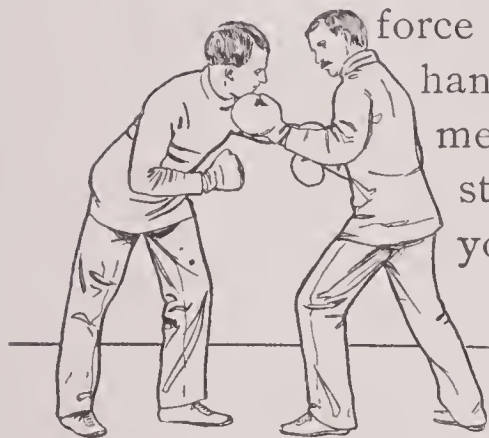
blow in which it is correct for the right foot to advance beyond the left. As your adversary leads, shift your right foot quickly to the right, in advance of the left, and allow his blow to pass over your left shoulder, at the same time stopping his forward motion with a



left-hand counter on his body. In the position that you now occupy you are free to deliver a right-hand blow at his head, or, by turning slightly on both heels, you may return to the position of the boxer, and thus, by being ready to deliver a new blow, force him to break distance.

There are two possible counters for the left-hand lead for the body, but only one of these is so likely to be effective as to render it important. In using this blow as a return for the left-hand lead for the body, block the lead with your right hand, and, leaning slightly forward, hit directly for the face with the left hand. (Fig. 12 )

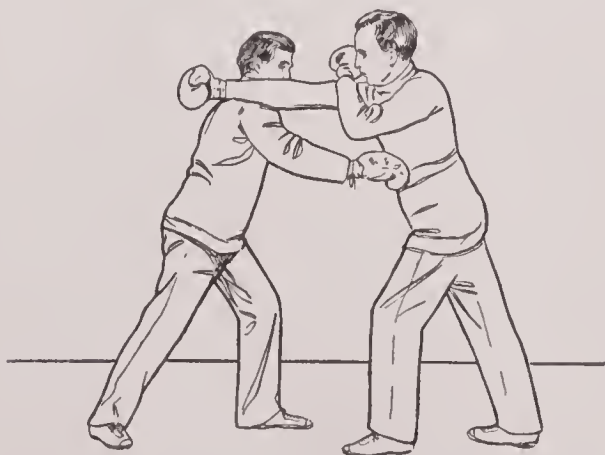
The right-hand counter for the face (Fig. 13) is similar to the above blow, except that the hands are interchanged, but it is of little value, as the chances are that your adversary's position will cause your blow to fall short, so that you will be forced to receive the full force of his blow on your guard. It is obvious, too, that a left-hand counter is the more feasible, as your adversary's movement is naturally to your left, and he is thus brought within striking distance of your left hand, but is out of reach of your right.



(Fig. 14.)

On the right-hand lead for the body you have the choice of two counters. The better of these is the left-hand hook for the head. (Fig. 14 ) In this blow, guard the stomach with the right hand, and "hook" your left arm to the point of his jaw or behind his ear. This blow is sometimes termed the "short arm swing," and as your position is favorable, and the opponent's awkward, the return is often effective.

The right-hand counter for the face on a left-hand lead for the body (Fig. 15) is a straight blow struck with the back of the hand up, the left hand at the same time guarding the body.



(Fig. 15.)

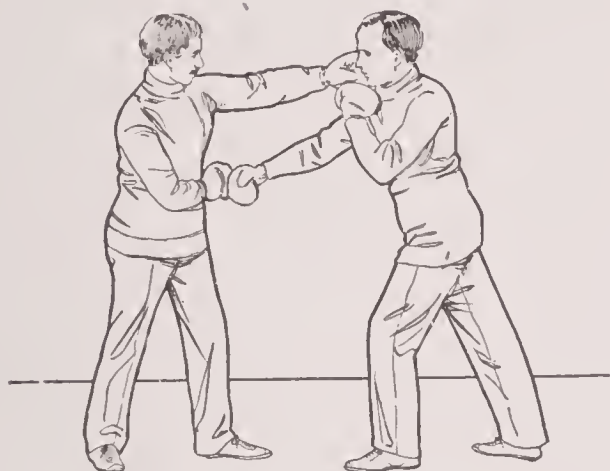


(Fig. 16.)

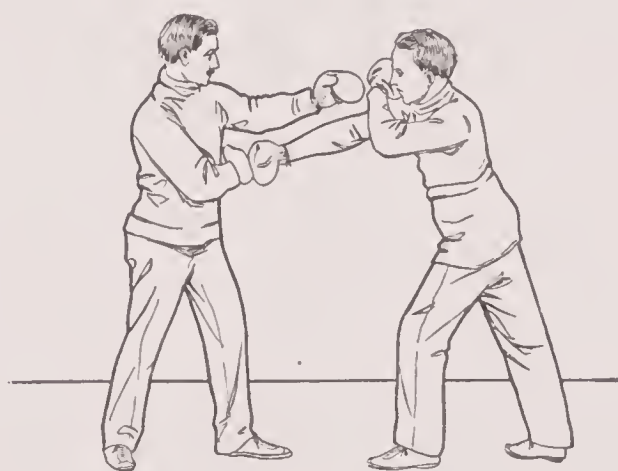
As has been said, the right-hand lead for the face is a dangerous blow to use, unless in taking advantage of an opening which seems to insure your "landing," and for this reason the counters are not

usually well known. The best of these is a side step to the left and a counter with the right hand on the body. (Fig. 16.) The instant your adversary leads, step lightly to the left, allowing his blow to pass over your right shoulder, and direct your blow to his ribs, as his body is squarely in front of you. Or, if you prefer, you may counter on his face, but it is more likely to be protected than his body.

The left hook for the body, while an excellent counter blow, is a very risky one, and requires long practise before it can be properly executed. To deliver it, duck to the right and step in at the same time, allowing the opponent's lead to pass completely



(Fig. 17.)



(Fig. 18.)

over your head, and, bending your left arm, send a hook blow to the right side of his body. Be very careful to have your head well guarded by your right arm, as your opponent is very likely to make a quick, left-hand return to this blow.

The leads, guards, and counters that have thus far been described go far to make up the first principles of Boxing, and must be mastered by every beginner before proficiency can be attained in the more advanced movements.

In the following table the various maneuvers that should be understood by one who has read them carefully, and has practised the instructions contained in this article, are arranged so as to show plainly the proper guard-counter to oppose any blow, as well as those to oppose the return, made by the person attacked.

#### LEFT-HAND LEAD FOR THE FACE

1. Right-hand guard. (See Fig. 17.)
2. Right-hand guard and left-hand counter for the face (1, 2, 4, 8, 9).
3. Right-hand guard and left-hand counter for the body (2, 10).
4. Left-hand guard and right-hand counter for the body. (Fig. 18.)
5. Duck and left-hand counter for the face. (Fig. 19.)
6. Duck and left-hand counter for the body (10). (Fig. 20.)
7. Right-hand counter for the face inside the arm. (Fig. 21.)
8. Right-hand cross-counter (15, 18).
9. Duck and right-hand counter for the body (19, 20). (Fig. 23)



## LEFT-HAND LEAD FOR THE BODY

10. Left-hand guard.
11. Right-hand guard.
12. Right-hand guard and left-hand counter for the face (Same as No. 2)
13. Left-hand upper cut. (Fig. 24.)
14. Right-hand upper cut.

## RIGHT-HAND LEAD FOR THE FACE

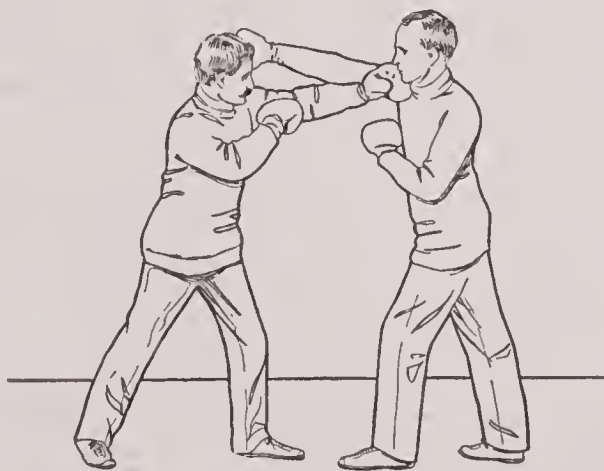
15. Left-hand guard.
16. Left-hand guard and right-hand counter for the face (15).
17. Duck and right-hand counter for the face (15).
18. Left-hand cross counter.

## RIGHT-HAND LEAD FOR THE BODY

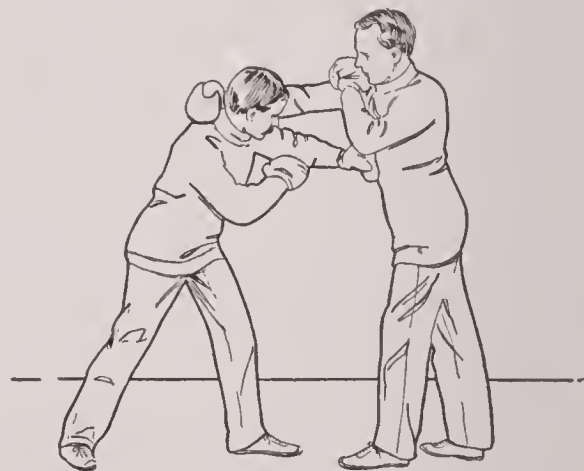
19. Left-hand guard.
20. Left-hand upper cut.

The numbers in parenthesis after each opposing blow show the guard or counter that should in turn be used to oppose that blow.

A beginner should make it a rule to master the defense for each blow, as well as the blow itself. The foregoing movements should be



(Fig. 19.)



(Fig. 20.)

practised in the order given, and each in turn should be thoroughly mastered before attempting another. Practise each blow slowly at first, and gradually increase the speed until the blows are made quickly and easily and with strength. The different blows should follow each other in rapid succession, but you should be careful to return to the position of the boxer after each blow.

The following is an example of the manner in which the double-lead and combination blows are struck: Lead for the face with the left hand, step in and strike again with the left at either the face or the body, or follow the left-hand lead with a right-hand blow at the face or body; a third blow can be struck with either hand in the same manner. The following maneuvers, consisting of feints to draw

out particular blows, and stops or counters to oppose them when delivered, are recommended by a well-known authority to the attention of beginners:—

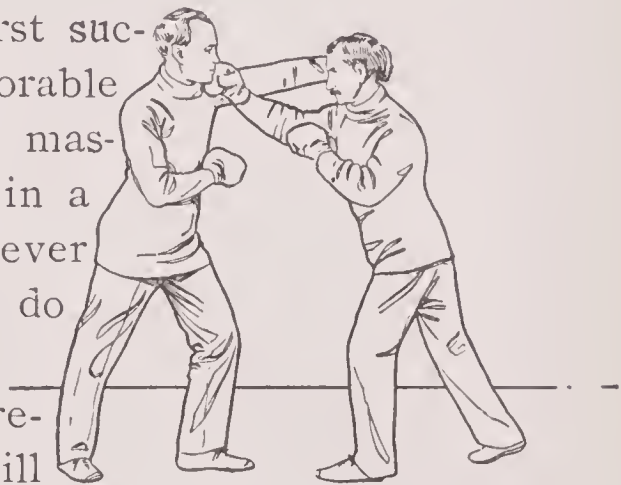
“Feint with the left hand to draw a left-hand counter. Guard the counter and counter it with the left hand.

“Strike with the left hand and let the blow fall short; your face will then be exposed to a left-hand counter, which you can cross-counter, or can duck and counter for the body with your right hand.

“Feint with your left hand to draw a cross-counter, throw the head back, allowing the blow to pass by your face, then spring in and strike over the arm for the face.

“Strike short with the left hand to draw a cross-counter, change the blow to a guard by turning the elbow up, and counter with the right hand.”

If in attempting any maneuver, you do not at first succeed, wait until you have another and more favorable opportunity and try again. When you have so far mastered the first principles of Boxing as to engage in a “set-to,” remember to observe the following rules: Never attempt the same movement twice in succession; do not be too impetuous; try to out-general your opponent, for science is superior to strength in this respect, and if you disregard your science, strength will surely win; do not lose your temper, for coolness always accomplishes more than hot-headedness; never engage in a rough, unscientific bout; BE MANLY AND SEEK NO UNDUE ADVANTAGE.



(Fig. 21.)

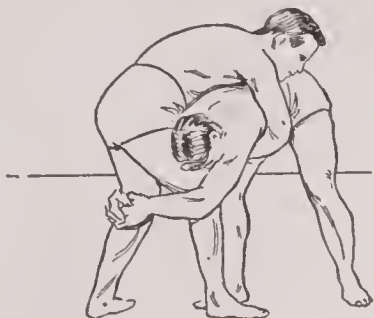
## WRESTLING

THE “catch-as-catch-can” style of Wrestling has been selected for illustration in this article, because it is the most widely used and comprises practically all the other forms. Nearly every nation has adopted some particular style of “hold,” in which its people become especially proficient, and the one to be described here has for several years been the best known in this country. It is by far the best style for amateurs, including those who enter into the sport principally for pleasure, rather than with the intention of engaging in contests. It is the most natural of all the various styles, is the most effective under all circumstances, and, unlike several of the styles of Wrestling common in Europe, necessitates no especial preparation in the way of clothing.

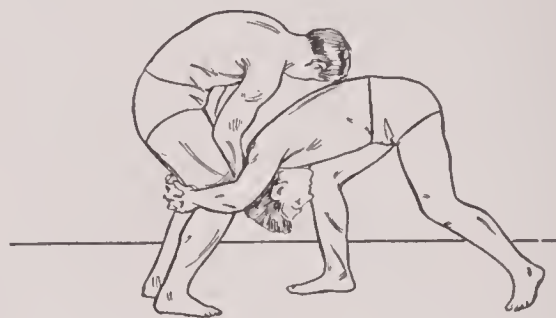
In beginning a bout at catch-as-catch-can, each contestant may assume the position that seems to him best suited to enable him to



secure advantageous holds and to prevent the securing of such by the opponent. It is customary among the best wrestlers to bend the body well forward on the hips, with the shoulders rounded and the head drawn down between them, the legs spread a good distance apart, and the hands and arms held in such a position as to be prepared to seize the opponent quickly or to ward off an attempted seizure by him. The curved shape of the back helps to prepare the wrestler to oppose a waist hold, the elevated shoulders and indrawn neck are intended to protect him from the dangerous neck holds, and the



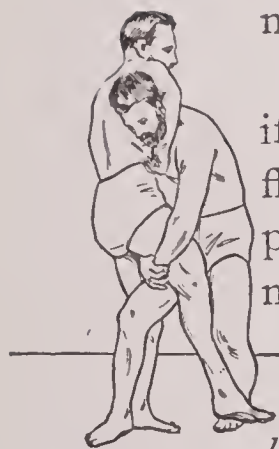
(Fig. 1.)



(Fig. 2.)

widely separated legs add stability to his footing and at the same time prevent the seizure of both legs by the arms of the opponent.

The description of the different holds will, naturally, be addressed to the aggressor, while those of the stops, breaks, and doubles, will apply to his opponent. It would be impossible to enumerate the holds that might be available for the one on the defensive after a successful escape, but he must be constantly on the lookout for an opportunity to become the aggressor whenever he is attacked, and must take advantage of any opening that may be offered to him.



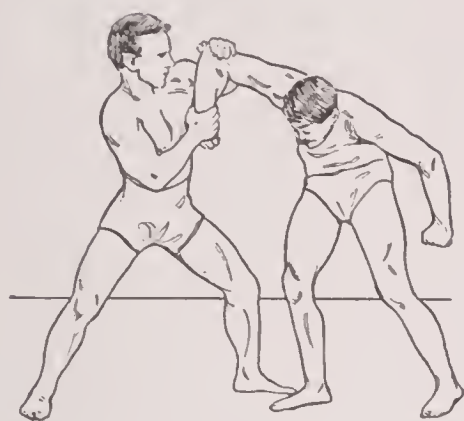
(Fig. 3.)

Ordinarily in amateur matches, a contestant is credited with a fall if he succeeds in touching both his adversary's shoulders to the floor or mat; this is referred to as *getting two points down*. Three points are sometimes required, but as this is done only after agreement between the two opposing wrestlers, reference will be made here only to the two-point fall.

One of the first forms of attack made by beginners is the *both-legs hold*. This is feasible only when the opponent's legs are close together, which would not be likely to be the case when he is on guard. Step quickly forward, stoop and grasp him around his knees with both arms, straighten the body and legs so as to stand nearly erect and throw him backward over your shoulders; turn in the direction of his fall, fall with him and force the two points down. To prevent this throw, bend forward after the leg-hold has been taken, and before the aggressor stands erect clasp him around the waist with both arms and lift his legs from the floor. (Fig. 1.)

A good break for the both-legs hold is executed by placing both your hands on the back of the aggressor's head, throwing your weight on it so as to force him to the floor, and falling with him; you should then look for an opening for another hold after you are both on the floor. (Fig. 2.)

Another simple hold is the *leg and inside back heel*. (Fig. 3.) Catch the opponent's nearest leg with both hands, advance your opposite foot between his legs so as to back-heel his other leg, and



(Fig. 4.)



(Fig. 5.)



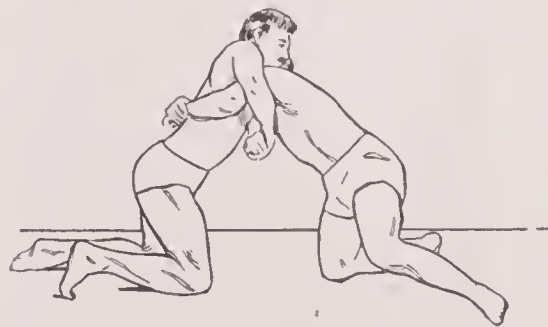
(Fig. 6.)

force him over backward. If he seizes you around the waist or neck and hugs you close, lift him and throw him over your head. To prevent this throw, grasp the aggressor around the neck with your forearm under his chin, seize his wrist with your free hand and squeeze hard. (Fig. 3.) This stop, as is the case with many other stops and holds, is for punishment only, and seldom results in your obtaining a fall. Not infrequently, however, it may result in your opponent giving you the fall, because of his unwillingness to remain in the position in which you place him.

Should your opponent give you an opportunity to seize one of his wrists, place your free hand beneath his elbow, twist his shoulder by forcing his hand backward and his elbow forward, thus forcing him to his knees and thence down until his shoulders touch. (Fig. 4.)



(Fig. 7.)



(Fig. 8.)



(Fig. 9.)

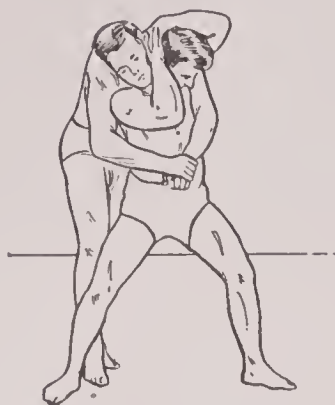
At the beginning of this hold, an opening is offered for what is known as the "arm up the back, with the brake on." Using his wrist and elbow as a lever, force his arm up his back, let go his



elbow and "put the brake on," that is, slip your forearm under and inside his nearest arm so that you obtain absolute and easy control of it. Let go his wrist, and with the hand thus freed bear



(Fig. 10.)



(Fig. 11 a.)



(Fig. 11 b.)

down on his neck and force his arm up until he is either thrown or acknowledges the fall. (Fig. 5.)

To make use of a simple *waist lock*, grasp the opponent around the waist, lift him until his feet are clear of the floor and throw him either directly backward or to one side. This may be combined with a leg "grapevine," as shown in Figure 6. (A grapevine hold is secured by twining an arm or leg about the opponent's arm or leg.) A stop for the waist lock may be executed by placing your hand on the aggressor's forehead and forcing his head back until the hold is broken. (Fig. 7.)

To double on a waist lock, throw your arm around outside of those of your opponent, clasp your hands tightly together, drop to your knees, thus forcing him to his knees, and by rolling to either side force his shoulders down. (Fig. 8.)

In the *half strangle and crotch hold* catch one of the opponent's thighs from the inside, place your free hand or forearm under his chin, force him backward and fall with him. (Fig. 9.)



(Fig. 12.)



(Fig. 13.)

To stop this hold, when the aggressor attempts to place his forearm across your neck, grasp his wrist and elbow and apply a shoulder twist. (Fig. 10.)

Should an opportunity be given for a *waist lock from behind*, lift the opponent and throw him directly backward to either side. To double on this hold, reach up and catch the aggressor around the neck, drop to your knees, draw his head forward and roll over forward,

pulling him with you until his shoulders touch. (Fig. 11, *a* and *b*.) An expert would not be likely to hold his head so far forward as to leave an opening for this double.

It may be noted here that many falls can be stopped by a *bridge*, which consists in holding the shoulders clear of the floor by support-



(Fig. 14.)



(Fig. 15 a.)

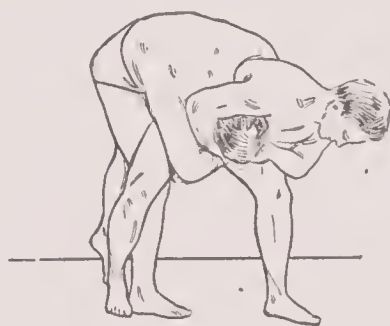


(Fig. 15 b.)

ing the body on the head and feet. The bridge may be strengthened by placing the hands on the hips and the elbows on the floor. Figure 12 illustrates the manner of making a bridge after the double described above.



(Fig. 16.)



(Fig. 17.)



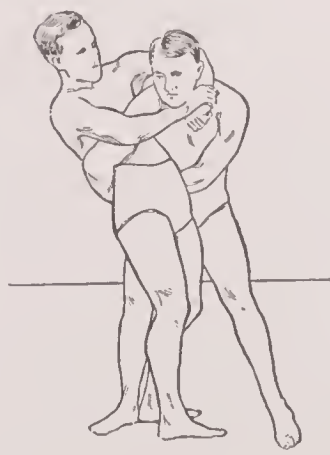
(Fig. 18.)

To break a bridge, place your forearm across the front of the opponent's neck, and press your free elbow against the pit of his stomach until his shoulders are forced to the floor. (Fig. 13.)

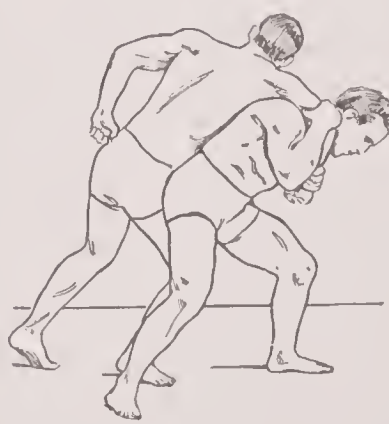
To execute a *buttock*, or *hip lock*, grasp the opponent about the neck, at the same time pulling him forward and throwing him over



(Fig. 19.)



(Fig. 20.)



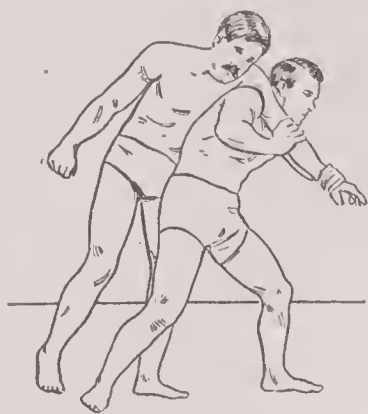
(Fig. 21.)

your hip; retain your hold of his neck, fall with him and force the two points down. (Fig. 14.) To double on this hold, when the aggressor seizes you, and before he has time to lift you over his hip,



drop your shoulder in front of his body, grasp both his legs from behind, lift him clear of the floor and fall with him. (Fig. 15, *a* and *b*.) Another double may be executed by catching the aggressor around the neck and by his nearest leg, or by placing your nearer arm across the front of his neck, grasping his leg and lifting him up and backward. (Fig. 16.)

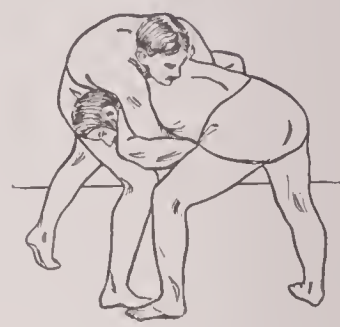
In the *buttock and outside-leg lock*, catch the opponent around the neck, pull him forward, step in front of his outside leg and force him



(Fig. 22.)



(Fig. 23.)



(Fig. 24 a.)

over. (Fig. 17.) To stop and double on this hold, before the aggressor has his foot in position, catch him around the waist, lift and throw him over backward. (Fig. 18.)

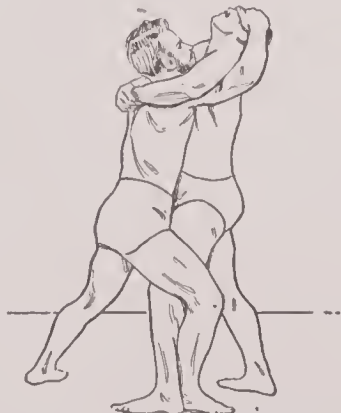
To execute the *cross buttock*, catch the opponent around the neck, or under the arm and over the neck, step well behind him and throw him over your hip. (Fig. 19.)

To make use of a *Cornwall heave*, turn sidewise, and with your nearer arm grasp the opponent around the body in front, at the same time clasping him from behind with the other arm; lift and throw him backward, and fall with him. This hold may usually be stopped by a neck hold, as shown in Figure 20.

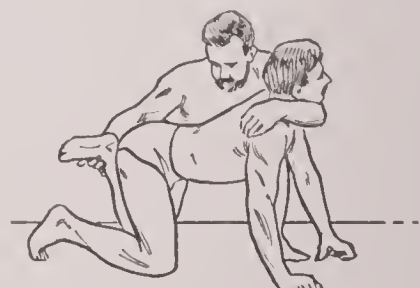
A very pretty hold, often seen in exhibition Wrestling, is the *flying-març*, which is made use of as follows: Grasp one of the opponent's



(Fig. 24 b.)



(Fig. 25.)



(Fig. 26.)

wrists with both hands, jerk him quickly toward you, turn and lift his arm over your shoulder, with the palm down; using his arm for a lever, throw him over your shoulder, fall with him, and retain your hold until you have forced the two points down. (Fig. 21.) The fall

may be made harder and more punishment may be inflicted by keeping the palm up and throwing him over your shoulder as before. (Fig. 22.)

To make use of the *arm grapevine and cross buttock*, seize the opponent's wrist with both hands, jerk him toward you, turn, step outside and behind his nearer leg, twine your arm about his, and throw him forward over your hip. (Fig. 23.)

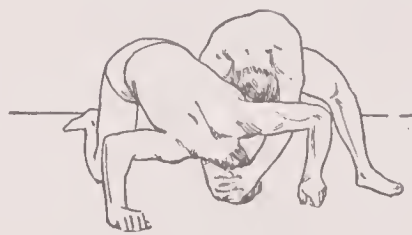
The *double front elbows* hold may be secured after trying for a both-legs lock and failing to secure it. To stop the former, the opponent will probably grasp you about the waist. If he does so,



(Fig. 27.)



(Fig. 28.)

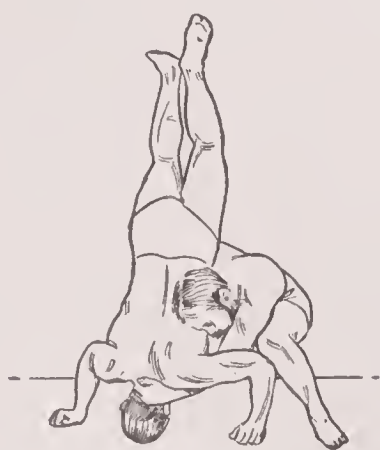


(Fig. 28 a.)

straighten up and throw him over your back, as in Figure 24, *a* and *b*.

Another hold that may be secured from a waist lock is the *neck-bend and back-heel*. Having secured the waist hold, if the opponent attempt to stop it by grasping you about the waist, reach up and clasp your hands across his face, force his head back, and back-heel him, as shown in Figure 25.

The holds that have thus far been described would naturally be secured from a standing position, and are intended primarily to force the opponent to the floor. But this does not insure a fall, and a large part of the science of catch-as-catch-can Wrestling lies in one's ability



(Fig. 29.)



(Fig. 30.)

to secure the necessary two-point fall by causing the opponent's two shoulders to touch the floor after he has been thrown off his feet, and to prevent this when acting on the defensive.

Suppose, for example, as is often the case, you have forced your opponent to his hands and knees, and desire to "turn him over." One way of doing this is by means of the *foot-and-neck* hold. Grasp his nearer foot, reach under his neck with your free arm, catch his

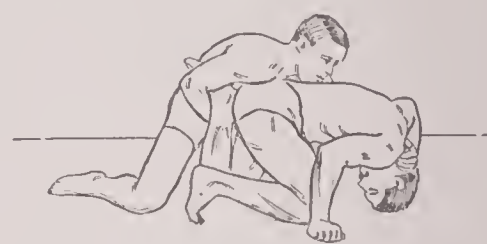


opposite shoulder, and by applying the leverage thus obtained, roll him over. (Fig. 26.) A fall may be obtained from this hold, but it is used principally for punishment.

One of the commonest of the great number of holds is the *half-nelson*, which may be used alone or in combination with other holds, either to force the opponent to the floor or to secure a fall afterward. The simple *half-nelson from behind* is obtained by thrusting your right arm under the opponent's right, or your left arm under his left, grasping the back of his head or neck, seizing his nearer arm with your free hand, and, by holding it down and using your arm which is under it as a lever, forcing him to the floor and then turning him over so that the two points touch.



(Fig. 31.)



(Fig. 32.)

The *half-nelson from in front* necessitates the thrusting of your right arm under his left, or your left under his right, instead of your right under his right, or your left under his left. To combine this latter hold with the leg lock when on the floor, get a half-nelson, and while turning him over, turn your back toward him and pass your free arm outside and under his opposite leg; bring his head and knee as near together as possible and roll him over. (Fig. 27.)



(Fig. 33.)



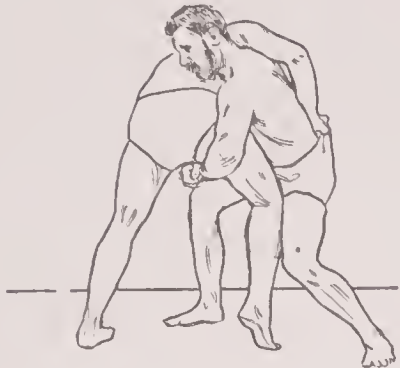
(Fig. 34.)

To stop a half-nelson from behind when on the floor, as your opponent attempts to get his arm under yours, pin it to your side with your elbow and throw your head back. (Fig. 28.)

To make use of a *locked half-nelson from behind*, get a simple half-nelson, reach under with your free hand, lock the fingers of both hands, or clasp the wrist of one hand with the other, place your head under his arm, pull his head under, roll him over, and fall upon him. (Fig. 28a.) If your opponent secure a half-nelson, attempt to break it by spinning round on your head, as a pivot, so that you will fall face down. (Fig. 29.) To prevent this action on the part of an opponent, catch him around the waist with your free arm and so prevent him from turning. (Fig. 30.)

To double on a half-nelson from behind on the floor, if his head is near enough, reach your arm over about his neck, pull him over your back and roll with him. (Fig. 31.)

To combine half-nelsons on neck and leg when on the floor, grasp the opponent's foot when he is face down, drop your knee on his leg just above the knee, to hold his leg firm, then bend his knee and get



(Fig. 35.)

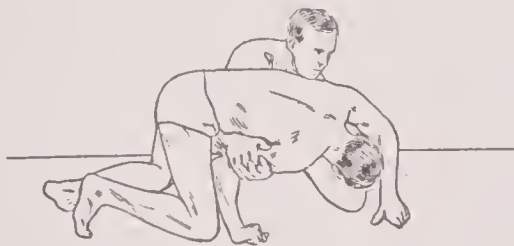


(Fig. 36.)

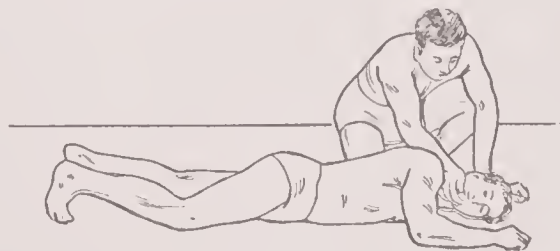
a half-nelson on his leg. Watch for a chance and slip your free arm under his nearer arm so as to get a half-nelson on his neck. You may now roll him over for a fall, and punish him at the same time. (Fig. 32.)

To combine a half-nelson with a crotch hold, when on the floor, get the half-nelson from behind, reach under and catch his nearer leg above the knee, from the inside, and roll him over head first. (Fig. 33.) This may be varied by seizing the farther leg instead of the nearer one. (Fig. 34.)

To increase the effectiveness of a half-nelson secured while standing, combine it with an outside leg hold, as follows: First get a half-nelson from behind, then reach over and place your free hand between his legs from behind, lift up, turn him over, and fall with him. (Fig. 35.) This may be varied by pulling his head down, grasping his opposite leg, doubling him up, clasping hands, lifting him from the floor, throwing him forward, and falling with him. (Fig. 36.)



(Fig. 37.)



(Fig. 38.)

Sometimes when trying for a half-nelson on the floor, you are given a good opening for an *opposite-arm hold*, as follows: Feint for a half-nelson, grasp the opponent's opposite arm near the shoulder with both hands, roll him over, and fall with him. (Fig. 37.) To prevent this action on the part of an opponent, bridge, and spin over on your face.

Though seldom used except for punishment, the *head hold and twist when on the floor* may sometimes be used to lead up to some other



hold. Catch the opponent's chin with one hand and the back of his head with the other, and twist toward you. (Fig. 38.)

In the foregoing brief description of some of the simpler movements in Wrestling, no reference has been made to the *full-nelson* and the *strangle* holds, which are so rough as to be brutal, and which are barred from amateur contests. It may be well to add, as a word of caution to the beginner, that Wrestling is a very severe form of exercise; and, even though in good physical condition, one should take it up gradually, if he desires to escape with the minimum amount of soreness and stiffness of the muscles.

For many centuries Wrestling has been a popular athletic sport. It is not brutal unless it is made so by a resort to violent means to overcome an adversary. As a gymnastic exercise it was encouraged among the ancient Greeks, and high honors and rewards were bestowed on the victorious wrestlers at the Olympic and other games. As practised by the Romans, wrestling was little less than a display of savagery and passion. The contestants were nearly or quite nude, and their bodies and limbs were besmeared with oil, so that it was only with the utmost difficulty that a hold of any kind could be secured and maintained. They grappled and struggled with the fury of wild beasts, and the more brutal the exhibition, the greater was the enjoyment of the multitude that surrounded the arena in which the contests took place. In England, for many hundred years, wrestling has been a favorite sport. Centuries ago it partook of the rough and brutal forms of the Romans, but these were gradually eliminated, and the wrestling bouts of later years have been free from cruel methods and practices. In our own country, the sport is free from objectionable features. The scientific wrestling of to-day is a combination of skill and strength. The latter is, of course, an indispensable factor, and, other things being equal, the stronger man will vanquish his adversary. In match bouts it is always desirable that the antagonists shall be as nearly equal as possible in weight and muscular power, for in such a case victory comes to him who possesses the greater skill.

## SPORTS AND GAMES—OUTDOOR

## ARCHERY

IN THE minds of most of us, the bow and arrow is intimately associated with ancient history and the discoveries and conquests of the various regions which have been found inhabited by primitive man. But neither as an instrument of war nor as an accessory to sport, has its use been confined to these times and peoples. At the present time, Archery holds a prominent place in the list of sports suitable for all ages and both sexes, while, in addition, the bow and arrow has certain uses in which it has never been superseded by any other weapon.

Bows with blunt-headed arrows are often used by naturalists in the capture of small birds and animals; particularly when they desire to avoid breaking the skin or soiling the feathers of the creature they wish to capture. Then, too, the bow and arrow, or some modification of it, is often used in scientific experiments, and it is put to other uses for which it has proved especially available.

But it is to Archery as a modern pastime that we must confine our attention in this article, with only the foregoing brief reference to the history and manifold uses of the various forms of the bow and arrow.

## THE BOW

THE Bow is really the most important implement of the Archery outfit, and as such is the first to claim our attention. Bows are of two kinds—"self" and "backed." The former is usually made of yew or lancewood, and consists of two pieces grafted, or spliced, in the middle, so that each limb is in one piece. Yew is the only wood that is suitable for a self-bow, but it is so scarce as to be expensive, and the cheaper lancewood is often used by beginners. Backed-bows are made of two or more strips of wood fastened together. Hickory and various other hard woods are used in the construction of both varieties.





The grain of the wood should be close, straight, and even, and the Bow should be free from knots and pins. Wood that answers these requirements is very scarce, and great care is necessary in purchasing a Bow ready-made or in selecting material from which to make one.

The parts of the Bow are named as follows: That part which is flat and which is farthest from the archer, is called the "back"; the "belly" is the rounded part nearest the archer; and the part in the middle, which is usually covered with velvet or other material, is the "handle."

All Bows should have practically the same shape. When unstrung, the back should be perfectly straight, and the back of each limb should be in the same plane. It is sometimes necessary to follow the grain in self-bows, and for this reason they may have the "Cupid" shape, or may be curved in other ways; but the back of a backed-bow should always be straight. Many backed-bows are made reflexed, and bow-makers often contend that Bows of this kind, and those which are "set back" in the handle, will keep their shape longest; but if accuracy is the prime object of the beginner he will do well to choose a straight Bow. The back should be flat, with the edges slightly rounded, and the belly should be gradually rounded. The back should not be too broad, since in that case the belly would have to be made too pointed and the limbs would be likely to become "cast" with use.

The horns at the end of the Bow, to which the bowstring is fastened, should be carefully secured in place, and the edges of the necks should be very smooth, so that they will not fray or cut the string.

The center of the Bow should be practically unbendable for from sixteen to eighteen inches of its length. From the extremities of this center to the horns, the limbs should bend gradually an equal amount. If one limb bends more than the other, the Bow soon loses its proper cast and the weaker limb is likely to break. The upper part of the handle should extend above the middle of the Bow, so that when grasped in the left hand, the ball of the thumb will rest on the middle of the Bow.

The length of the Bow should be in proportion both to its own weight and to the length of the arrow to be used. For a twenty-eight-inch arrow the Bow should be at least six feet in length; and as the length of the arrow varies an inch or more each way, that of the Bow should vary correspondingly.

The most important point to be considered in the selection of a Bow is that it should be of proper weight. The beginner should

choose a Bow of such weight and strength that he can easily handle it, and especially one that does not draw so hard that he is prevented from loosing the arrow quickly and steadily. Extreme care is necessary to keep a Bow in good condition.

Whenever possible, it should be preserved from dampness, and if used on a damp day, both Bow and string should be rubbed dry with a soft rag. The string should then be rubbed with beeswax. Especial attention should be given to the ends of the Bow and the handle, which are the parts most susceptible to dampness. Should a sliver or splinter be detected, it should be glued down at once and wound with narrow silk ribbon, which should also be glued. A layer of strong thread should then be put on tightly, and, when dry, the mended part should be varnished.

Never draw a Bow to its supposed limit without fitting an arrow to it; you may not estimate the elastic limit of the Bow correctly, and by drawing it too far may weaken or even break it. Bows often break from no apparent cause, even when well cared for, and when no knots, pins, or slivers, can be detected; unfortunately such accidents cannot always be avoided by exercising care in the selection of the Bow itself or of the material for its manufacture.

Fortunately, it is not difficult to mend an ordinary fracture, or even to replace a broken limb, and, if carefully done, these repairs often make the Bow as good as new. The best short rule for the selection of a Bow is, "first, examine it for blemishes in the wood, then *try* it."

### THE ARROW

THE Arrow really has more to do with accuracy of shooting than has the bow. It is possible to make good shots with an inferior bow, but not with crooked or weak arrows, unless by accident. Arrows are usually made of red deal, and are called "self" or "footed," according as they are made of one piece, or are footed with hard wood at the "pile," or head end. The latter wear better, and, owing to the heavier point, their flight is truer.

An Arrow should be perfectly straight, and stiff enough to withstand the pressure that must be applied to it in shooting. If an Arrow be weak at the feather end, it will "flirt," or jump, on leaving the bow, and will fly off to the right or left.

In selecting new Arrows, care should first be taken to see that each is straight, after which it should be examined closely to find out if it is at all weak, or bends too much, or bends differently on different sides. The *nock* should be well made, with the edges smooth and the bottom convex, and the sides of the *horn* should not be too thin.

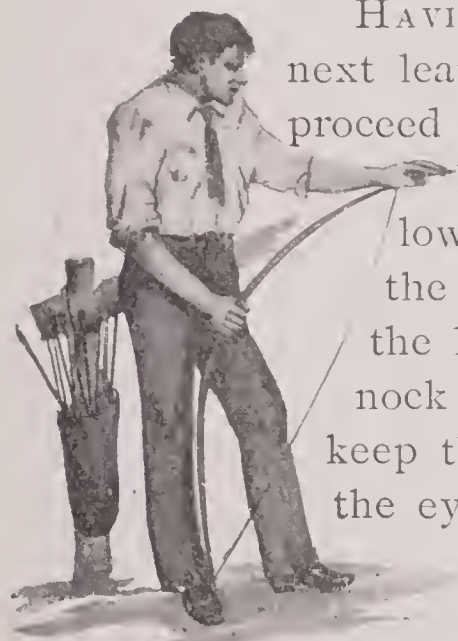


The feathers are a very important part of the fitting of an Arrow, and it is essential that all three should be shaped and curved exactly alike. They should be from one to two inches in length, about half an inch in width, and placed as far back as possible, leaving room for the fingers to grasp the Arrow in drawing.

The average length of an Arrow is, for men, twenty-eight inches; for women, twenty-five inches; but longer and shorter ones are often used. The Arrow should always be drawn to the head to insure accuracy, and for this reason its length must depend partly on that of the shooter's arm. A short Arrow has the advantage of being stiffer than a longer one of the same weight; but for each person there is an "ideal" length and weight which can be known only by experience. The Arrows of a set should be as nearly alike as possible, both in weight and in the location of the center of gravity.

Arrows are made in four patterns: the "bobtail," the size of which gradually decreases from the point to the nock; the "chedered," in which from twelve to eighteen inches at the nock end is largest; the "barreled," which gradually decreases in size from the center to each end; the "parallel," which is the same size throughout its length. The last is the best of the four. It flies more steadily than the others, and its shape makes it strong and not liable to become crooked on striking the target.

### STRINGING THE BOW



HAVING selected the bow and a set of arrows, the beginner should next learn the correct manner of using them. To string the bow, proceed as follows (one loop of the string is in position on the lower limb): Place the bow with its back uppermost, so that the lower horn rests against the right foot or in the hollow of the right instep; grasp the handle with the right hand, and place the left on the upper limb of the bow at such a distance from the nock that when the fingers are extended they can easily reach it; keep the first and second fingers bent at first, the tips resting against the eye of the string; pull the bow toward you with the right hand, pressing the upper limb down and extending the fingers of the left hand at the same time, till the eye of the string slips into the nock.

In the foregoing description the hands may be interchanged, and the left foot may be used instead of the right. To unstring a bow, the position is the same and the method of procedure is similar; sufficient pressure is applied to the upper limb to allow the eye to be slipped out of the nock, and the pressure is gradually reduced until the bow is straight, as at first.

## QUIVERS AND TARGETS

It is necessary for a woman to be provided with a belt with Quiver attached, and though this is often used by men, the majority of them prefer to carry the arrows in a pocket of the shooting coat. There are numerous other little accessories with which archers sometimes provide themselves, such as "tips" for the fingers of the right hand, and "bracers," or arm guards; but these are by no means necessary.

The kind of Target that has been found most desirable is four feet in diameter, is made of straw, and has a canvas face on which four concentric rings are painted. The center is gold-colored; the ring next to it, red; then blue, black, and white. The values of the rings are, respectively, 9, 7, 5, 3 and 1, and the score of an arrow is the value of the highest ring that it touches.

Usually, two Targets are placed opposite and parallel to each other, from two to five yards farther apart than the distance to be shot. The Targets are elevated so that their centers are about four feet from the ground. Each archer stands at the proper distance in front of one Target and shoots three arrows at the other; these three are called an "end." After all have shot, another end is shot from in front of the opposite Target, and so on until the designated number of arrows have been shot.

## GENERAL INSTRUCTIONS

IN ARCHERY, position counts for a great deal, and the beginner should give especial attention to it. Stand sidewise, with the feet eight or nine inches apart, at the angle that is most natural, so that a line drawn through both heels would intersect the middle line of the target. The shoulders should be in nearly the same line, the head turned to the left, the body easily erect, and the legs straight at the knees.

Grasp the handle of the bow with the left hand, and adjust it between the second knuckle of the first finger and the ball of the thumb. With the right hand take the arrow from the quiver or pocket, and bringing it *over, never under*, the bow, place it on the knuckle of the left hand, and fit the string to the nock. The "cock-feather," which is at right angles to the nock, should be farthest from the bow.

Place the first finger on the string above the arrow, and the second and third below it, and hold the arrow without pressing the string. The right wrist should be bent slightly outward; the left should be held straight, in its natural position, just above the left hip. Hold the arrow in line with the target.



While drawing, the body should be kept erect and the head turned toward the target. Transfer the weight of the body so that it shall rest more on the right foot than on the left, and more on the heel than on the ball of the foot. Gradually extend the left arm, tightening the grasp on the handle, and draw until the pile of the arrow comes on the bow, and the right hand touches the face near the chin, directly beneath the eye. The hand should be brought to the face, and not the face to the hand.

During the foregoing operation, the point of aim should be covered approximately. The right elbow should not be raised above the line of the arm until the arrow has been drawn about three-fourths of its length, after which it should be kept up and back so as to preserve the true line.

Complete the aim by holding the arrow so that the pile shall cover the point of aim, and be careful not to lessen the pull so that the arrow will "creep." The line and height of aim will, of course, vary according to distance and the strength and direction of the wind, if any. Any change of aim must be made by moving the left hand, as the right should always remain in place. Keep the body erect and prevent tipping forward by keeping the muscles of the back braced and the weight chiefly on the heels.

Now comes the most important part of the shot,—the loose, or release, of the arrow. Keep the right hand in place, endeavoring to bring it back at the moment of loosing, just sufficiently to compensate the extension of the fingers. Be careful to keep the wrist straight and the elbow up; the hand must not leave the face, and thus leave the line of aim, nor must it drop or follow the arrow, even a fraction of an inch. The left hand should also be kept in position until the arrow strikes, since the archer will thus be able to ascertain if he has shifted his position in loosing, and to estimate what change, if any, should be made in his point of aim.

Extreme care and strict attention to every detail are absolutely necessary, if one is to become proficient in the use of the bow and arrow, and, in addition, the beginner should follow the advice of a well-known archer: "Never lose your temper, and never stop trying because you 'can't shoot.' "

## BICYCLING

FROM the date of the introduction of the safety bicycle, the popularity of Bicycling increased with such rapidity that thousands of inventors turned their attention to the perfection of the details of cycle construction, and each season witnessed marked advances toward perfection in the machine. Within a little more than

ten years, almost every feature of construction that could contribute to the safety, pleasure, or convenience of the rider had been perfected, and the necessity for changes in the bicycle almost entirely disappeared. Of course, there will continue to be differences in the machines produced by the different makers, and improvements will be made in some of the minor details, but it is safe to say that no more changes of a radical nature will ever be made in bicycle construction.

When compared with the other inventions of the nineteenth century, the bicycle is not ordinarily considered a "great invention," for all the principles of physics underlying its construction were well known many years before their application to that particular vehicle, but there are few, if any, of the great inventions that have given as much keen enjoyment and genuine pleasure to the human race.



With the possible exception of golf there is no other sport that can claim devotees of ages so widely diversified, and certainly no other sport has ever been so widely popular as Bicycling has been during the past ten years. As the novelty of the bicycle gradually wore off, the enthusiasm of many cyclists also waned, but there are still hundreds of thousands of riders in every civilized country.

The ease with which the cyclist is able to ride long distances, at high speed, is the most attractive feature of Bicycling, and yet it is the one which has caused the sport to be most strongly condemned. The feeling of exertion is so slight, and the exhilaration so great, that the rider feels as if he could completely annihilate space, and unconsciously he increases his speed until he reaches the point of overexertion; or he prolongs his ride until he has overtaxed his strength. The inevitable results of excessive exertion follow, and the blame is improperly thrown on the bicycle. To avoid such unpleasant results, the rider has only to exercise moderation.

## HOW TO RIDE

SUGGESTIONS as to the proper use of the bicycle, to avoid injurious effects, would be out of place before a few directions have been given for learning to ride. The best way for one to learn to ride the bicycle is with the assistance of an experienced rider, who should support the machine while the beginner mounts, and continue to do so and to give directions, until the pupil has acquired sufficient skill to



manage the machine unaided. But to those who have to learn to ride without the aid of an instructor, a few directions will be useful.

The first thing necessary is a suitable place for learning, and this should be selected where the ground has a slight slope, and where the beginner has plenty of space to turn from side to side without danger of running into fences or other obstructions. A gently sloping meadow, in which the grass is cut short, makes the best possible place, for in all probability the ambitious beginner will not master the art of riding without a few falls, and the yielding turf of a grass-clad meadow makes a much better surface upon which to fall than a road-bed or the bare earth.

When a suitable place has been found, the bicycle should be taken to the top of the slope and faced toward the descent. To mount, first grasp tightly the handgrips on the handle bar, then place the left foot on the step on the rear axle and, after starting the machine down the slope by a push with the right foot, rise on the step and slip forward into the saddle. The slope of the ground should be sufficient to keep the bicycle in motion until the rider has placed his feet upon the pedals, after which he will have no difficulty in propelling it.

At the first attempt the beginner will probably ride only a few feet before he will lose his balance, and bicycle and rider will tip over to one side; but if he put out his foot quickly on the side toward which the machine is falling, he will be able to dismount without a fall. Even if he fail to do this, he will find that a fall is not a serious matter, and at his next trial he will be less fearful of getting one.

It is more difficult for a woman than for a man to learn to ride a bicycle, since she is not only less accustomed, as a rule, to athletic exercises, but she is hampered by her attire. On account of her skirts, a woman must use a bicycle with a drop frame, and must mount from the pedal instead of from a step on the rear axle. This is a more difficult feat than a man has to perform in mounting.

In order to mount successfully, the woman should place her bicycle in a position that brings the pedal on the right side near to the top of its path, with the pedal crank slightly inclined forward. Then, standing on the left side of the machine and inclining it toward her, she should place her right foot on the right pedal, and, holding the machine steady with her left hand, should carefully ar-



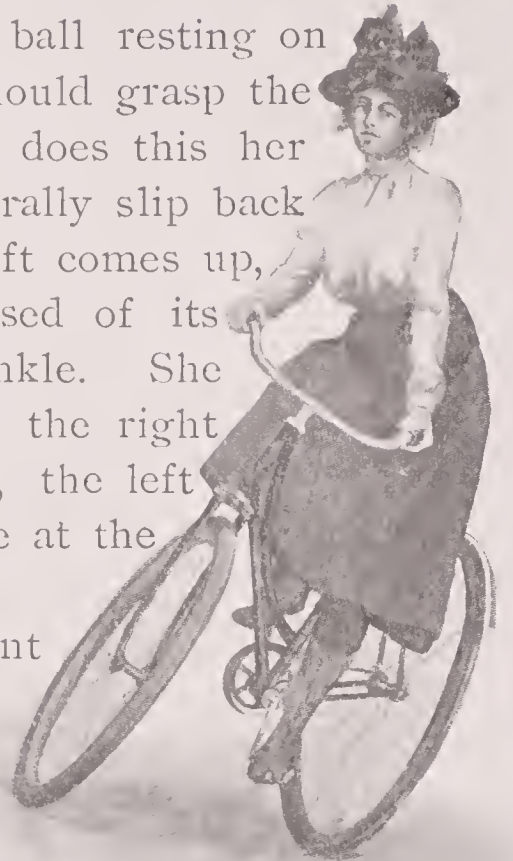
range her skirts so that when she rises on the pedal and slips back on the saddle they will hang evenly on both sides of the bicycle. If she fail to do this, the unevenly hanging skirts will interfere with the freedom of her movements, and may cause a bad fall. It need not be said that in learning to ride a bicycle a woman should always wear a short skirt—one that is at least so short as to leave the foot and ankle unimpeded.

When she has placed her foot in position, with its ball resting on the pedal, and has arranged her skirts properly, she should grasp the handle bar firmly and rise on the right pedal; as she does this her weight will drive the bicycle forward, and she will naturally slip back into the saddle. As the right pedal goes down the left comes up, and, unless she is careful, the novice may be apprised of its coming, by feeling it strike the back of her left ankle. She should guard against this by lifting the left foot as the right descends, and, when the right foot ceases to go down, the left should be lowered upon the pedal which will then be at the top of its path.

After a few attempts, most beginners succeed in mounting and in getting the feet in proper position on the pedals, but it takes a longer time to learn to steer the machine. At first one has a tendency to grip the handle bar very tightly, and to keep the arms rigid; consequently, when one turns the wheel to one side or the other, one is inclined to pull on the handle bar with too much force and thus turn the wheel too far. One is also likely to turn the bar in the wrong direction, but with practice these mistakes will be avoided.

A moment's reflection will make it apparent that when the bicycle tips to one side the front wheel must be turned in the same direction to keep the machine from falling. The reason for this is that by turning the front wheel in the direction in which the bicycle is falling, a support is placed under it on that side, while if the front wheel be turned in the opposite direction all support is removed and a fall results.

When the novice has learned to manage the bicycle fairly well and can mount and steer without difficulty, he should practice dismounting while the bicycle is moving rapidly. This accomplishment is one that comes only with practice, and no directions for acquiring it can be given except the advice to keep a firm hold on the handle bar, and to jump far enough from the machine to keep the pedals from striking you before you can stop yourself and the bicycle, after





your feet strike the ground. If you do not keep a firm grip on the handle bar, you will be almost certain to fall when you dismount while moving rapidly.

Since emergencies frequently make it necessary to dismount instantly, the bicycle rider should never ride at great speed until he has become proficient in dismounting. The neglect of this precaution has caused many serious accidents to reckless riders, while the ability to dismount at once while riding at high speed has frequently been the means of saving both life and limb.

As in all other sports, the novice finds Bicycling even more enjoyable than do the experienced riders, and he seldom knows how far or how fast to ride at first. The unaccustomed speed, the smoothness of the motion, and the apparent absence of fatigue, lead to over-exertion, and even if the rider does not carry it to such a degree that permanent injury results, he frequently finds that his muscles stiffen and feel sore for several days after a ride. The tendency to bring on this feeling of soreness and stiffness by riding too hard at first is more common among women and girls than among men and boys, and the former should be especially careful to avoid it, if they would derive the greatest pleasure from the use of the bicycle.

No precise rules can be laid down for the novice in determining how far and at what speed to ride, but he, or, more especially, she, should remember that some time is required for one's muscles to become accustomed to new forms of exercise. At first the rides should be short, and the speed should never be sufficient to make the rider unusually warm, or to make him or her breathe hard. If these facts are borne in mind, the beginner will avoid the disagreeable stiffness and soreness that often last for days after the first long ride.

### VACATION TOURS

THE use of the bicycle for Vacation Tours is one of the most enjoyable forms of cycling, and there are few ways of spending a vacation that yield more pleasure than a tour awheel through some beautiful or unfamiliar region. In traveling in this way, the tourist becomes much better acquainted with the natural features of the country he traverses than would be the case if he traveled by rail, and at the same time he obtains the benefit of outdoor exercise.

While bicycle tours, as a rule, are enjoyable, they may prove quite the reverse if they are not properly planned and sensibly carried out. Touring by oneself is generally uninteresting. The pleasure is more than doubled by having one or two congenial companions; but a party of more than four is often undesirable, because it is hard to adjust the daily runs and the pace so as to suit all the members of a large party.

Then, too, there is the difficulty that is sometimes experienced in finding accommodations at night. When the region to be traversed is entirely unfamiliar to the tourists, they frequently find it necessary to seek lodging at farmhouses, and it is often difficult to secure accommodations for more than two persons.

When it is possible to do so, the route should be fully planned before the start and the length of each day's run should be determined in advance. In settling upon the length of the daily runs account must be taken of the character of the roads to be traveled and of the physical condition of the riders. It is well to make the runs, especially for the first few days, shorter than the riders think they can easily accomplish. By doing this, the tour will be without the undesirable accompaniments of sore muscles and stiff joints; whereas, if the strength of the riders is too severely taxed on the first two or three days, the rest of the trip will be deprived of most of its pleasure.

A maxim that the cycle tourist should keep in mind is the old saying that "an ounce of prevention is worth a pound of cure." Many a delay or long walk to the nearest town has been brought about by failure to act on the advice contained in this old saw. Before starting on a tour of considerable length, the cyclist should make sure that his "kit" is supplied with all the tools necessary to keep the machine properly adjusted, and he should also carry some extra spokes, as well as materials and tools for temporary and permanent repairs to his tires. Needless to say, the bicycle should be thoroughly overhauled just before the beginning of the trip, and its perfect condition at the time of the start assured.



## RACING

BICYCLE tours and spins for exercise, such as have already been discussed, are the forms of cycling in which all riders may indulge, and which are most beneficial to the health of the riders; but the kind of cycling in which the public takes the keenest interest, and into which every rider who is fitted for it is almost certain to drift at some time, is Racing.

The desire to excel his fellows is as strong in the cyclist as in the devotee of any other sport, and the excitement of the contest makes the pleasures of other forms of bicycling tame in comparison. This feature leads many riders to undertake Racing who are not capable of standing the great strain of muscle, nerve, and heart which it



entails, and in these riders are seen most of the ill effects which some persons regard as the inevitable results of Bicycling.

For young men who are physically sound, and who train properly for their races, however, bicycle racing is not necessarily any more injurious than other contests requiring great physical exertion. There is, of course, a certain degree of danger from accidents while riding at the great speed attainable under the most favorable conditions, but there seems to be a special providence that watches over the bicycle rider, for accidents are comparatively few, and when they occur, the injuries received by the riders seem extremely slight in view of the nature of the falls they receive.

A mishap to one rider in a fiercely contested race sometimes brings down a dozen others and their mounts in a confused mass of men and machines, from which it seems impossible for all the riders to emerge alive. Yet after a fall of this kind they all rise, with no greater injuries than a few bruises and the loss of a little cuticle.

#### FANCY RIDING

THE last form of bicycling which we shall consider is what is commonly known as "Fancy" Riding. This is hardly a form of sport,—unless it is held to include bicycle polo,—and consequently only a few words need be said about it here. Almost any rider can easily learn to perform a number of feats with the bicycle; indeed, it can be made to run under conditions that seem to defy the laws of motion and of gravity; but it is impossible to give directions for acquiring the skill necessary for such feats. The only way to acquire it is by patient and persistent practice, which in time will bring about the desired result.

It should be remembered, however, by the rider who is ambitious to perform the feats of the professional trick riders, that they ride machines built especially for them and adapted to withstand strains to which an ordinary bicycle would succumb. The ordinary machine is designed to undergo only such strains as are put upon it in riding in the usual way, and when used for Fancy Riding it may soon be ruined.

#### POLO

BICYCLE POLO, to which reference has been made, does not properly come under the head of trick riding, but to play it successfully requires such complete mastery of the machine that it may not be inappropriate to consider it in this connection. The game is played in a court of varying dimensions, the most common ones being seventy-five feet in length by fifty feet in breadth.

The goals, one of which is at each end of the court, are about ten feet in width, and the number of players on each side varies from three to five. The "ball" is a block of wood two inches square and one inch in thickness; it is propelled by blows administered with the wheels of the players' bicycles.

The court must, of course, have plenty of open space around it, so that the players may go out of bounds without encountering any obstacles. The positions of the players in the court depend upon the number engaged in the game, and this, as well as the periods of play and the plan of scoring, may be determined by previous agreement. The game is a most fascinating one, but bad falls are not uncommon, especially where the number of players is large. It should not be attempted by other than expert riders.



#### PHYSICAL ADVANTAGES

THE beneficial effects of cycling as an exercise have been touched upon in several of the foregoing paragraphs, so that a lengthy discussion of cycling, from the physician's point of view, will not be necessary. Much has been written on the effects of Bicycling on the health, and the conclusions reached are that, like all other forms of exercise, it is injurious when carried to excess but beneficial when indulged within proper limits. Its especial advantages are that it is an exhilarating form of exercise, and is not onerous when taken regularly; that it brings a considerable number of muscles into play; and that it can very easily be regulated in both character and amount. Its chief drawback is that the rider is unmindful of fatigue and is apt to carry the exercise to excess without becoming aware that he is doing so. The various conditions which most frequently lead to over-exertion have already been mentioned.

#### CARE OF THE WHEEL

A MATTER that is of much practical interest to all cyclists is the proper care of the bicycle. Many riders of long experience have not learned how to keep their mounts in the best condition, and a few words on that subject may not be amiss. The two essentials in the proper care of bicycles are to keep all parts clean and all the bearing surfaces well lubricated. The bearings should be opened and inspected periodically, and if at all dirty they should be cleaned with oiled waste and then be packed with vaseline. Many riders wait until they can hear a faint grating sound in the bearings before they con-



sider cleaning necessary; but much damage may have been done before the sound is noticed.

In the chain bicycles the proper care of the chain is a matter of great importance, as a dirty chain makes the bicycle run much less easily. The chain may easily be cleaned by placing it in a can of kerosene and shaking it vigorously for a while, and then wiping it perfectly dry. Before replacing it on the sprocket wheels, it should be dipped into melted vaseline or lard, and be wiped again after cooling. When it is in place on the bicycle, the bearing surface of the chain blocks should be rubbed with graphite. This solid material makes the chain run smoothly and noiselessly on the sprockets and, unlike oil, it does not gather dust. Attention to these simple directions will not only make a bicycle last longer than it otherwise would, but will add much to the comfort of the rider.

## WALKING CLUBS

AMERICANS live indoors more than do any other people in the world, dwellers in the frigid zones alone excepted. This is partly due to the character of our climate, which passes quickly from one extreme of temperature to the other. It is partly due to the character of our civilization. Much of even mechanical work is practically sedentary, for the workman's duties are chiefly to feed and watch the machine.

This excess of indoor life has attracted much attention in recent years, and an unmistakable feeling has developed that more outdoor life would be a gain. Surely it is not nature's plan that men and women should spend so large a portion of this life indoors. If it were so, the world would not have been made so beautiful. The grace of the trees, the carpeting of the green meadows, the wild flowers strewn lavishly in unexpected places,—

"A violet by a mossy stone  
Half hidden from the eye,—"

the dazzle of the winter's snow, the sheen of the water, the songs of birds and brooks, the ever-changing panorama of gorgeous cloud scenery, the clear, crisp air of the morning—nature's champagne—the caresses of the south wind,—surely these were not made in vain. They are nature's invitation to come out into her realm.



The first practical aim of walking is health. This is so evident that it needs no argument. A good walker, whether man or woman, has a sort of independence that is denied to others. People who are utterly unable to walk a mile or two are not rare. If these get caught, as they often do, where there is neither trolley car nor carriage at hand, they are simply helpless.

In this our British cousins put us to shame. When the famous essayist and poet, Matthew Arnold, was in this country, he failed to make a desirable connection at a railway junction. Learning that his destination was only fifteen miles distant, he at once set out afoot. No doubt he would have walked all the way had not, as he expressed it, a kind-hearted man come along in a timber wain (lumber wagon) and given him a lift.

How much better for him thus to start out for the pleasant and healthful walk, than to spend four hours complaining of the inefficient railway service. Such independence is no mean item in life. One who does not like walking is simply suffering punishment when compelled to walk; one who does like it receives pleasure and benefit from the same circumstance. One who cannot walk well is hampered every day of his life.

Walking Clubs are organized to promote this healthful and delightful exercise. These may be permanent organizations, though they will not be less satisfactory if they are temporary, and are planned for one jaunt or for a series of short excursions. An extemporized organization for a trip every second day, for a week, or for a month, might hold the zest of the pedestrians through that limited period, while an attempted permanent organization would fall to pieces by its own weight.

For the specific jaunt, or for the series of short excursions, there should be a measure of intelligent preparation. There is a class of open air books excellently adapted to this purpose. In this are included Dr. Vandyke's "Fisherman's Luck," Mr. Mabie's "Nature and Culture," and all the works of John Burroughs. Nor should we forget that classic work, perennially fresh, Isaac Walton's "Complete Angler." The appreciative reading of such works is the best preparation, and will add spirit to the tour.

#### MAKING UP THE PARTY

UNREASONABLE stress is frequently laid upon the making up of the party. Do not forget that, with the utmost care, you are not likely to get together a party of angels. If you did, they might expel *you*! You are to take such men and women as you can get. They should love to walk, and they should be companionable. Instead of trying



to weed out the members so as to get the ideal party, spend the time in cultivating meekness, so that you may keep your temper sweet when your companion, tired, foot-sore, and perhaps ill, grows unexpectedly cross and selfish.

If you can have a kodak in the party, or an artist with a facile pencil for sketches, so much the better. Musicians are better still. Nothing effaces the worries of the day as does good music after a good supper. The writer was one of a party of five who walked through half of Switzerland a few years ago. Four were musicians, three of them being from the Stuttgart Conservatory, and one made charming pencil sketches. None of them was angelic in disposition, but the trip was most enjoyable.

If there be scientists,—botanists, geologists, ornithologists,—that is well. A historical knowledge of the route traversed is also desirable. But the office of historian of the party, one appointed to write up the record of the trip, is almost certain to prove a delusion and a snare. Let that office be omitted. If any individual feel called and inspired to act as historian, let him do it of his own motion and at his own peril. But do not take the responsibility of voting him into the office.

Little need be said regarding the matter of dress.

A costume suitable for the golf links or for the bicycle is correct for walking. The point of chief danger is in the shoes. These should have stiff soles, but must be entirely comfortable to the feet. As soon as one's feet become very sore, that one is peremptorily put out of the game.

#### LONG DISTANCE WALKS .

IF a jaunt of several days or weeks is contemplated, the plans should be elastic. Even though the plans be made wisely and carefully, they cannot provide for every exigency, including change of weather, and least of all for the varying desires of the company. When it seems best to modify the original plan, do not let any misplaced conceit prevent you from doing the wise thing.

Never lose sight of the purpose of the jaunt. It is not to cover a given number of miles. It is not to lay up material for future boasting. If it be a pleasure trip, try to let nothing interfere with legitimate pleasure. Better stop with a satisfactory walk of fifteen miles, than to increase the distance to twenty-five miles, and regret that you were so foolish as to undertake it.

If at any time it become evident that there is no pleasure in the trip, nor any hope of pleasure, even if it be indefinitely prolonged,



then cheerfully acknowledge the fact, yield to the inevitable, go home by the quickest conveyance, and laugh good-naturedly over the *fiasco*.

Do not demand too much of the pleasure you expect to get. It is not reasonable to hope that your ecstasy will be kept up to the operatic pitch for sixteen hours of the day. But it is one of the beautiful arrangements of nature, that the little annoyances and frictions which are exceedingly irritating at the time, will be forgotten, while the main current of happiness will remain to sweeten the memory.

If the plan covers several days, or a longer period, one must make full provision for rainy days. It is astonishing how greatly the soul of the saint may be vexed when one is imprisoned for thirty-six or more hours in a farmhouse, with no music to while away the time, no work to do, no book to read, no game to play. Look out for that and provide against it. The rainy day is likely to be an incident in every extended tour.

In point of distance, don't cover much ground at first. If you walk too far the first day, on the second day you will feel the reaction, so that nothing is gained; and, what is worse, it will take the spirit out of the whole affair. The physical enthusiasm of the first day is delusive.

Another popular error is that the distance can be slightly increased every successive day. For instance, fifteen miles the first day, eighteen the second, and twenty the third. Until the pedestrian is thoroughly inured, every second day may be looked on as an "off" day, or a day of comparatively small progress. The writer's thought can be best expressed by an illustration. The figures are not intended to express precise distances, but approximate proportions. Start on Thursday and make fifteen miles; twelve on Friday; fifteen or twenty on Saturday; rest on Sunday; twenty or more miles on Monday; half as many on Tuesday. Then you will have struck your pace and may do as you please during the remainder of the outing.

It is well to avoid notebooks. They are only less stupid than the formal historian of the party. "But," you ask, "shall we keep no record of the trip?" By all means! And there is just one way of keeping a satisfactory record. It is by writing letters. Write every night to some intimate friend; and let that friend be a young person, if possible. Such a record will have a sparkle, a vividness, a vivacity that you cannot possibly infuse into a diary. After the trip you may borrow those letters and revamp them into the form of a record.

One cannot too highly favor Walking Clubs as a means of recreation to young people. The short trips, out and back in one day, have much to commend them. They are inexpensive, healthful, social, and educational. When time is a matter of consideration, form



in rank and march like soldiers. This is the only defense against the laggard who delights to keep back the whole company. When you come to a fine view, allow time to take it in. Bring out your best social qualities as earnestly as you would at a party, so that the company may break up with mutual congratulations and good wishes, and all be eager for a happy return of the walking day. So doing, you will get your living as you go along, improve in health and in intelligence, and lay up a store of memories, the sweet fragrance of which will refresh future years.

## HARE AND HOUNDS

**H**ARE AND HOUNDS is a sport best suited to the crisp days of autumn or early winter, when the harvests have been gathered and the fields are brown and bare — when the ground is firm and the air is fresh and bracing. Then there is a rushing of blood through the veins, an eager desire for activity and freedom from restraint, that are lacking

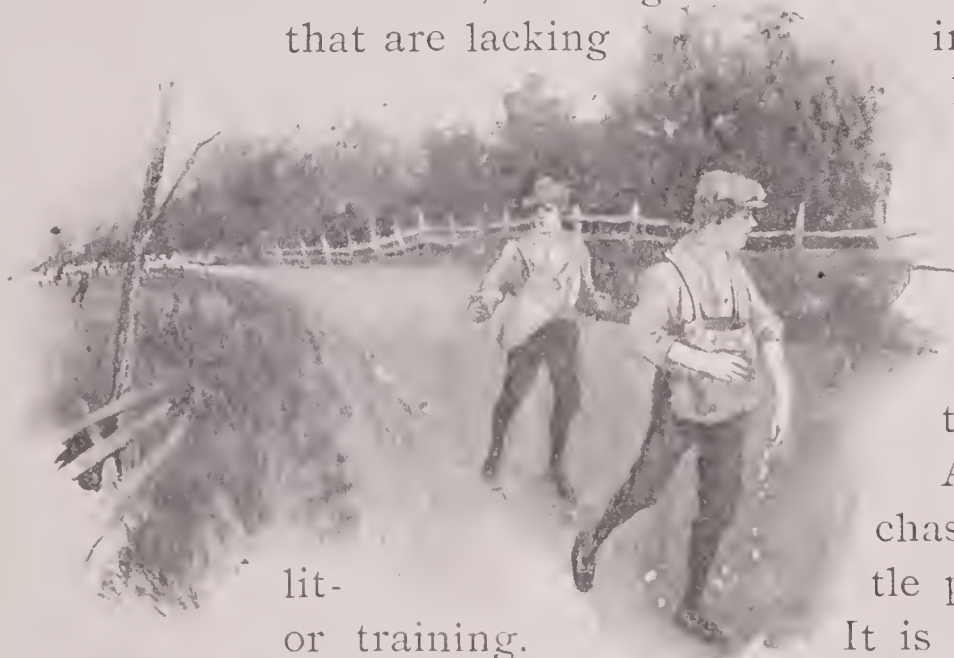
in the warm summer days. This sport has an element of expectancy and uncertainty which gives it a breathless interest from start to finish. At the same time, it calls forth all the mental sagacity of the participants, as well as their swiftness of foot and their physical endurance.

lit-

or training.

It is really a sort of pursuit race over a selected course by those pursued, and known by the pursuers only when they go over it.

There may be any number of participants in the run, and the more the merrier. They are divided into groups, or sides, the members of which are styled respectively Hares and Hounds. The former are usually two in number, and are chosen for their fleetness and endurance. They are given a few minutes' start before being followed by the Hounds, whose object is either to catch them or to cover the course in less time than is taken by the Hares. This course usually forms an irregular circle from five to ten miles in circumference. It is selected by the Hares, and is indicated by them to the Hounds by the scattering of small pieces of white paper, which constitute "scent."



## BEFORE THE START

THE accessories of the game are of the simplest description, and consist principally of the scent and the bags in which to carry it. Any kind of paper will do. It should be cut or torn into small pieces; cut paper is preferable, as it is less likely to be confused with any other loose paper that may be near the course.

Newspapers make very good scent, though a heavier paper is desirable on a breezy day, as it is less likely to be blown away. The scent bags may be made of any stout cloth, and each should be fitted with tape loops so that it may be slung from the Hare's shoulders. A hoop of wire sewed into the mouth of the bag will hold the latter open so that the hand may easily be inserted. The paper should be tightly packed in the bags, so that their bulk may not impede the Hares too much in running. A small, pointed stick, to which is secured a white cotton flag, should also be provided for the Hares. This is used to mark the "break," or spot where they stop dropping scent, which they do some distance from the finish.

Both Hares and Hounds should dress comfortably, but should not wear too heavy clothing while running, for even on a cold day a long run will warm one very noticeably. Well-worn, easy shoes, which are not too thin, short trousers, a sweater or jersey, and a knit cap make a desirable costume.

Before the start the Hounds should select a "Master," whose duty it is to decide on the pace and to call one Hound after another to set it. This is necessary in the "close" game, where the Hounds keep together and must have a leader.

In the "open" game, where the Hounds scatter and each man is for himself, the pleasure of companionship is lost and the sport becomes more like a long footrace. In the open game, it is usual to require the Hounds to bring in pieces of colored paper left by the Hares at the extreme limits of the run. This proves that the Hounds, as well as the Hares, have been over the course. In the close game this precaution is unnecessary.

If the run is to be pretentious, and especially if prizes are to be given, two or more judges should be appointed. They should remain at the starting-point, which is also the finish, start the Hares and the Hounds, and note the time taken by each to cover the course. They should notify the "Master of the Hounds" a half minute before the Hounds are to start, or "throw off," in order that he may get the "pack" ready. The judges should compare their watches previous to the start and see that they are set alike, and should note to the second the time taken by both Hares and Hounds to finish the run.



It is usual to allow seven and one-half minutes start to the Hares, and to require them to double this time on the run, in order to win. In other words, if any Hound arrives at the finish within fifteen minutes of the Hares, he is entitled to the prize; if not, the Hares win.

### THE RUN

LET us imagine a number of boys ready to start for a Hare and Hounds run. It may prove interesting to see some of the tricks that artful Hares can play on their pursuers.

The judges call "Time for the Hares!" and at a steady, but not rapid, jog trot, off they go with the big bags of paper under their arms. They at once begin to scatter "scent," which they must do in such a way as always to leave a clear trail. It is usual for them to alternate in the dropping of the paper at intervals of about ten minutes, so that neither may be unduly tired by the extra exertion.

Usually the Hares will have laid their plans before the start, and they now proceed to put them into execution. When they come to a fence, one Hare may turn short off to the right or left, while the other goes over it for a hundred yards, and leaves a "blind scent." He must not cut across to his companion, however, but must retrace his steps to the point where the two separated and then join the other Hare. This rule is made because a real hare may double on his track, but he cannot "cut corners" without leaving a trace for the dogs.

Running in loops or circles, so as to cross their own track, is another trick of the Hares, but it loses time for them, as well as for the Hounds, and so should seldom be done. If at any time the Hounds sight the Hares, they may abandon the scent and follow by sight. Otherwise, unless they can see the crossing of a loop, they must not cut across country to where they *suppose* the Hares to be, but must follow up each twist and turn of the trail. The Hares should avoid crossing water except by way of bridges. In the first place, wet feet are neither pleasant nor healthful, and in the second place, scent dropped in water is likely to sink or to be carried away, and thus does not leave a fair trail.

When the Hares have completed half the course, or find their scent half gone, they start toward the finish by a new route, and prepare for their greatest effort. About a mile from the finish, or "home," the last of the scent is dropped in a pile, and the little flag-staff is planted securely in its midst, or, if colored paper is used, it is secured in place by a stone. Then, folding their scent bags, the Hares take the shortest and best way home, where they arrive panting and tired.

After the start of the Hares, the Hounds have still seven and one-half minutes to wait, and a time of "impatient patience" it usually is. Finally, the Master receives word from the judges to "line up the pack," and then exactly on the second comes the word "Go!" that starts the Hounds.

They are usually very eager at first and would put on all possible speed, but this the experienced Master will not allow, knowing that in a ten-mile run it is best to start slowly. Usually he sets the pace at the start himself, and calls on others to relieve him after the pack have secured their "second wind."

When the Hounds come to a fence where the Hares have left a "blind scent," they often fall into the trap and waste time in following the blind trail and in hunting for the real one. A knowing Hound, however, looks along the fence first, and sometimes the Master spreads the pack on coming to a suspected fence, and tells each Hound to notify the others if he finds the trail branching off.

A loop in the trail, while it may save time for the Hares, may not trick the Hounds at all. If they can see where the two parts of the trail cross they may, of course, follow it without going round the loop. From the foregoing it will be seen that the sport is something more than a test of strength and endurance. It is also a trial of wits—Hares against Hounds—and the shrewder often wins.

Finally the flagstaff, or other "break signal" is sighted, and then it is every one for himself. Each Hound strives to be the first in at the finish, which is often hot and exciting. The judges must take each Hound's time accurately, and if the pack is large, each should be numbered and should cry out his number to the judges as he crosses the line.

If prizes are to be given, they may be presented to the winner as soon as the last straggling Hound arrives, — *but never until proper precautions against cold have been taken.* A bath and a rub down are desirable, but if not convenient, warm, dry clothing and shelter will obviate the only danger incident to this healthful sport.

Three things which should be avoided by both Hares and Hounds are the tendencies to run too fast, to change speed too often, and to talk. Every one should expend his strength judiciously so as to finish well, and each will need all his "wind" in running.

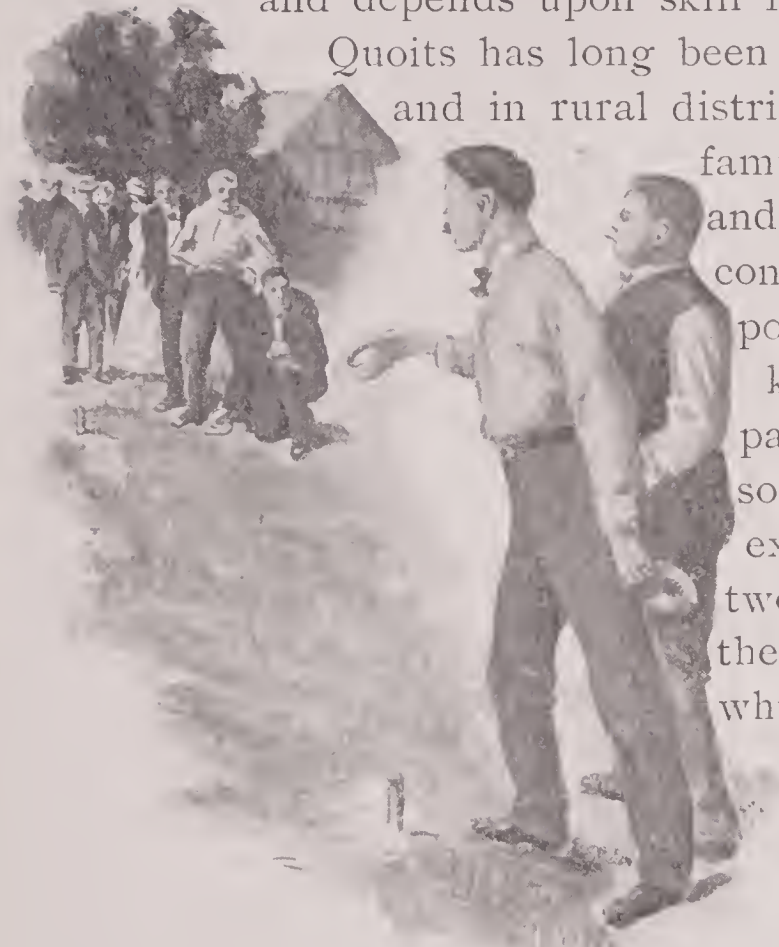
Hare and Hounds is one of the few sports that appeal both to the boy and to his parents. To the former by reason of its life, activity and spirit of competition, and to the latter because it is healthful and stimulating, is inexpensive and free from danger. If proper care is taken after a run to prevent the body from being chilled, the after-effects will be limited to an appetite that will surprise even a mother,



and a glow of circulation and a healthy, tired feeling that will induce a strong desire to repeat the run at the earliest opportunity.

## QUOITS

THE game of Quoits, or "Pitching Quoits," as it is more commonly called, slightly resembles the ancient sport of throwing the discus. The modern game requires much less exertion, however, and depends upon skill rather than strength.



Quoits has long been a popular outdoor game, especially at schools and in rural districts, and even now it is often enjoyed as a family recreation in which those of both sexes and all ages may take part. There are several considerations that have tended to make the game popular, and that will doubtless go far toward keeping it so. For example, it requires comparatively little space for ground; few accessories are needed, and none of them are expensive; any number of persons greater than two may play; and plenty of opportunity is given the players for the use of skill and judgment, while at the same time the game furnishes a considerable amount of light, beneficial exercise.

### THE GROUND

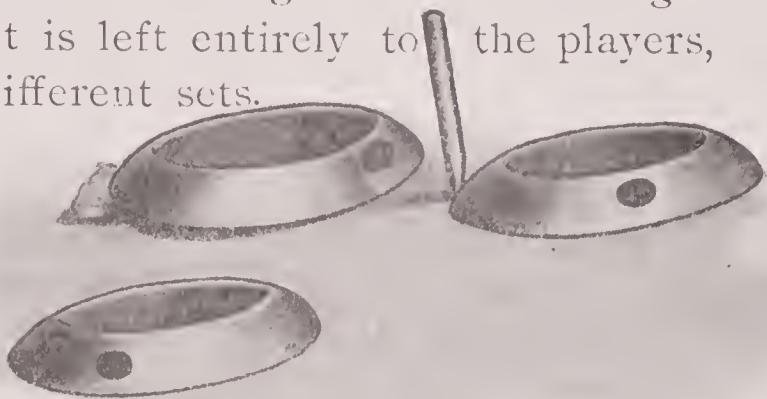
THE space required for a Quoit Ground may be anywhere from twenty to forty yards in length, and must be of sufficient width to allow the players room for pitching; six feet is ample. The ground selected may be either bare or covered with turf, but it should be comparatively soft. Two pegs, usually of iron, are driven into the ground about nineteen yards apart, though this distance may vary, by agreement of the players, between fifteen and thirty yards. These pegs, which are variously called *spuds*, *hobs*, and *spikes*, should project one inch above the surface of the ground, though in ordinary games this rule is not generally adhered to, and the hob often projects four inches or more. The object of the players is to pitch the quoits so as to cause them to fall over the pegs, or as near as possible to them.

### THE QUOITS

REGULATION quoits are nearly flat rings of iron, or sometimes of rubber (Fig. 1., *a* and *b*), about eight inches in external diameter, and

one or two inches in breadth. They are convex on the upper side, and slightly concave on the under, so that the outer edge curves downward, and is sharp enough to cut into soft ground. The weight of the quoits is uniform in a set, but is left entirely to the players, and consequently varies greatly in different sets.

Instead of quoits manufactured especially for the purpose, horse-shoes are often used, and they make very acceptable substitutes.



(FIG. 1 a.)

### THE GAME

ALTHOUGH there may be any number of players, the game is made more interesting if there is an even number, so that two sides, or teams, may be formed. Each player has two quoits, which he pitches each time that his turn to play comes; and the players pitch in rotation or alternately, according as they are playing individually or by sides.



(FIG. 2 b.)

In beginning the game, all of the players pitch their quoits toward the same hob, from a point near the other hob. The primary object is to pitch the quoit so that it will make a "ringer," that is, will fall so as to encircle the hob. Failing in this, the player's secondary object is to cause his quoits to strike and remain as near as possible to the hob.

When each player has had a turn, the score is decided, and each picks up his two quoits. They then pitch from the second hob toward the one near which they stood during the first round, and alternate in this manner between the two hobs throughout the game. In deciding the score of the players, or sides of each hob, *ringers* count two each, and the two quoits nearest the hob count one each. Thus we see that if a player's two quoits are nearer the hob than are those of his antagonist, he scores two points, while if he has only one nearer, they score one point each. In case the two nearest quoits are equidistant from the hob, and belong to different players, neither scores.

The quoit is held with the forefinger along its outer edge, in which there is a small cup-shaped dent for the end of the finger. This gives a better grip, and prevents the possibility of the finger being cut. The two surfaces of the quoit are held between the thumb and the other fingers, and the quoit is pitched with a slight rise so as to make its fall as nearly perpendicular as possible, and is given a rotary motion which makes its flight regular. In case one quoit strike an-



other and displace it, the new position is the one that decides as to its score.

Following are the essential rules governing the game of quoits:—

### RULES

1. The distance from hob to hob shall be agreed upon by the players. The player shall stand in line with one hob and shall deliver his quoit at the first step.

2. No quoit shall be used which measures more than eight inches in external diameter. The weight may be unlimited, or as agreed upon by the players.

3. The hob shall project one inch above the surface of the ground, which, if possible, should be clayey and sufficiently soft so that the quoit will be partially imbedded when it falls.

4. All measurements shall be taken from the hob to the nearest visible part of the quoit; the quoit and the soil must not be disturbed.

5. No quoit shall count unless it is fairly delivered, and strikes so that some part of its outer rim is free from the soil. No quoit on its back shall count unless its rim holds in the ground, or unless it has been knocked out by another quoit. No quoit that rolls on the ground shall count, unless it first strikes another quoit or the hob.

6. Each player must deliver his two quoits in succession, and the different players must alternate in order of delivery.

7. When an umpire is chosen to interpret the rules and to decide disputed points in the game, his decision shall be final.

### BASEBALL

FOR many years Baseball has been the American national game. During the past few years, however, other games have, to some extent, displaced it in schools and colleges. Then, too, professionalism has robbed it of some of its former attractions as an amateur sport; but the time is far distant when Baseball will lose the place it has held for nearly half a century in the hearts of the American youth.

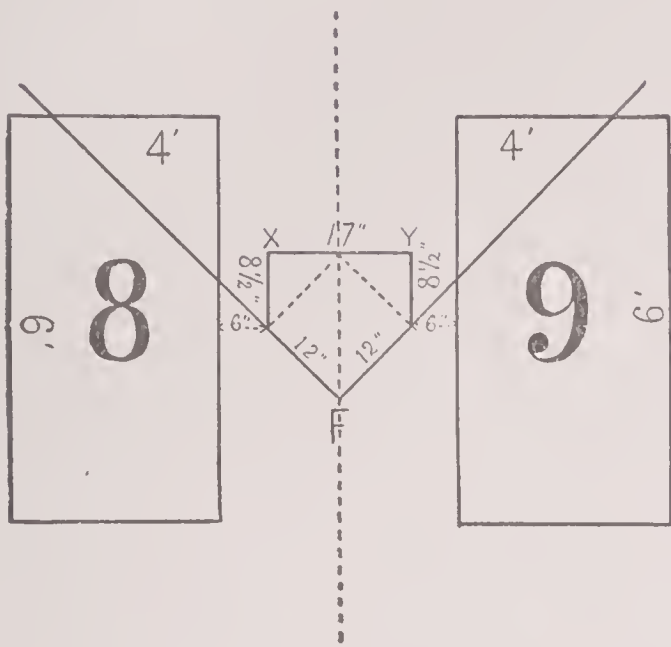
The Spring and early Summer are the times of year best suited to the game, and the advent of Spring is hailed with delight by the young people of both sexes, and by many of their elders, as being coincident with the beginning of the Baseball season.

### THE GROUND

THE space on which the game is played may be either turf or bare ground, and should be as level and smooth as possible, and free from all



obstructions. A simple way of laying out the "diamond," and marking the necessary lines, is as follows: (See Diagram.) Select a spot at one end



of the field which is suitable for *home base*, or *home plate*, and drive a peg in the ground at that point. To this peg secure a tape measure, and, walking in a straight line toward the center of the field, drive a peg at a distance of sixty feet six inches to mark the *pitcher's plate*, and another at a distance of one hundred and twenty-seven feet three and one-half inches from the home plate to mark *second base*. At a spot ninety feet from the home plate and sixty-three feet seven and three-fourth inches to the right

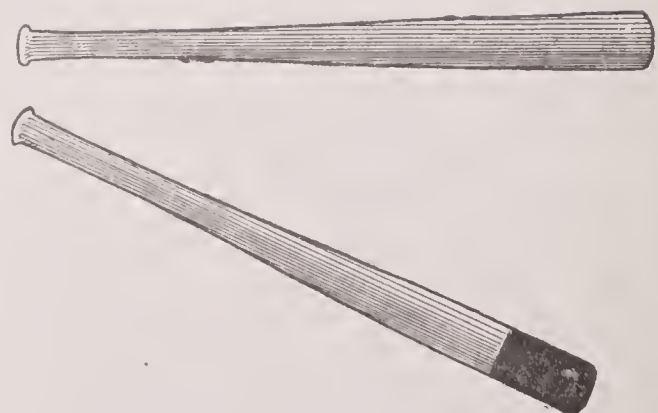
of the center line, drive a peg to mark *first base*, which will then be ninety feet from second base. At a corresponding position on the left side of the center line mark *third base*. By connecting the four bases thus located by means of lines marked with lime, the diamond is formed. Now extend the line connecting home base and first base, and that connecting home base and third base, to the limits of the field, and thus mark the *foul lines* and the catcher's position. These are the principal lines of the field, but other auxiliary lines, called the *players' lines*, the *coachers' lines*, etc., must be marked. Their position and extent relative to the diamond will best be understood by reference to Nos. 2 to 12 of the appended rules.

The home base is a plate six inches square, made of wood, whitened rubber, or other suitable material, and fixed in the ground so that it is level with the surface. It is placed in such position that two of its corners are in the center line of the field. The pitcher's plate is made of similar material and is twenty-four inches long and six inches wide. It is placed with the middle of its longer sides in the center line of the field. The first, second, and third bases are marked by white canvas bags filled with sawdust or other soft material, and are secured to pegs firmly driven into the ground.

## BALL, BAT, AND TEAM

THE regulation Baseball is a leather-covered sphere, between nine and nine and one-fourth inches in circumference, and weighing between five and five and one-fourth ounces.

A Baseball bat is made entirely of wood, except that the handle may be wound with twine or other suitable material to assist the player in securing a firm hold. It may not be more than forty-two inches in length, nor more than two and three-fourth inches in diameter, at its thickest part.





A Baseball team is composed of nine players, and two teams take part in each match. The game is divided into nine parts, called innings, which are subdivided so that each team has nine half-innings at bat, and nine half-innings in the field; one team being in the field while the other is at bat. The object of each team is to score as many runs as possible during the time its players are at bat, and to prevent the opponents from scoring. The side scoring the greater number of runs during the entire game wins the match. In case of a tie score, other innings are played until one side gains an advantage, but each side must have the same number of innings at bat. To score a run, a player must start from home plate, and after making a complete circuit of the bases, return to the home plate without being put out.

Previous to the game an umpire is selected who is satisfactory to the captains of the opposing teams, and he is the judge of the players, the score, the rules, and, in fact, of all matters connected with the game. No player, except the captains, is allowed to address the umpire regarding any decision made by him. This manner of selecting the umpire applies either to an amateur or to a non-professional game. In each of the national, state, or other professional leagues, a staff of salaried umpires is appointed at the beginning of a season, and these officiate as directed from time to time by the league official charged with that duty.

## THE GAME

IN BEGINNING the game, the two captains toss for choice of innings, and the one who wins the toss usually prefers to have his team take the field, and gives his opponent the first inning at bat, thus reserving the final inning at bat for his own team. His team then take their positions in the field, as will be explained in detail, and the players of the opposing team take their turn at bat in the order that has previously been arranged by their captain. The order is usually such that the good batsmen alternate with the poorer ones, thus preventing several poor batsmen from going to bat in succession.

The pitcher of the fielding team takes his position behind the pitchers' plate and at the word "Play!" from the umpire, pitches the ball to the catcher, who stands behind the home plate. The batsman stands on either side of this plate, as is most convenient, and endeavors to strike the ball with his bat as it passes from the pitcher to the catcher. Each batsman is entitled to three *strikes* or four *balls*, each of which is called by the umpire as it passes the home plate. (The terms *strike* and *ball* are explained in the accompanying "Glossary of Terms.")

If the batsman receives three strikes without making a *fair hit* he must run to first base. He will then be "out" if the ball is fairly caught by the catcher when the third strike is made, or, when not caught, is thrown



by him to another player, who, while holding it, touches first base with it, or with some portion of his body or clothing, before the runner touches that base. If the runner does not reach first base safely, in the opinion of the umpire, he is "out" and is temporarily retired from the field.

If four balls be delivered by the pitcher to the batsman before he receives three strikes or makes a fair hit, he is permitted to go to first base "on balls." If the batsman be struck by a pitched ball, he is sent to first base on a "dead ball." If the batsman strike a pitched ball with his bat so as to make a fair hit, he must immediately run to first base. Should the ball be caught by any player of the opposing team before it touches the ground, or, if not caught, be thrown to a player who touches the base in advance of the runner, the latter is out. As soon as the first batsman has either been put out, or has safely reached first base, he is succeeded at bat by the player of his side who is next in batting order, and the batting proceeds as at first.

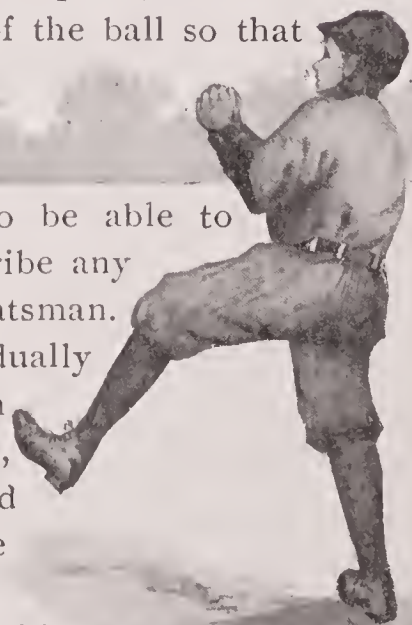
After a batsman reaches first base safely, he endeavors to advance successively to second base, third base, and the home plate, either when the ball is batted or when some other circumstance enables him to do so, without being touched by the ball in the hand of one of his opponents when he is not touching a base. When three men of the batting side have been put out, that half of the inning is finished, and that side goes into the field and their opponents take their inning at bat.

The game thus progresses in a series of innings, all of which are played in a manner similar to that just described for the first inning. The foregoing is intended only to embody the general principles of the game; the numerous intricate points of play, which require careful study on the part of one who wishes to become thoroughly familiar with the scientific game of Baseball, are clearly set forth and explained in the appended rules.

## DUTIES OF THE PLAYERS

*The Pitcher*—The pitcher takes his position behind the pitcher's plate, and delivers the ball to the batsman. He should have thorough control of the ball so that he may pitch a greater number of strikes than balls, and should learn to judge different batsmen so as to know what style of delivery will be most likely to confuse each. It is desirable that he should pitch the ball with great speed, and he should also be able to deliver it so that it will revolve rapidly and thus be made to describe any one of several curves, which in pitching are used to deceive the batsman.

These include the *out curve*, in which the path of the ball gradually curves to the left of the pitcher; the *in curve*, or *in shoot*, which curves to his right; the *up shoot*, which curves upward; and the *drop*, which curves toward the ground. Two of these, such as the out and the drop, may be combined, thus causing the flight of the ball to be still more erratic. In addition to pitching the ball to the batsman, the pitcher should endeavor to stop any batted ball that passes near him, and should watch the runner to prevent him from "stealing a base."





*The Catcher*—The catcher's position is perhaps the most difficult and dangerous one on the team. His duties are comparatively easy until "two strikes" or "three balls" are called, or unless there are runners on the bases. He must then stand close behind the home plate and catch the ball the instant it passes the batsman. He is protected from injury by a wire "mask," a rubber body protector inflated with air, and heavily padded gloves, but even these do not always prevent him from being seriously bruised. The catcher should arrange a code of signals with his pitcher, so that he may let the latter know what style of ball he desires to have delivered each time, or may signal him to throw the ball to one of the other players so as to prevent a runner from stealing a base.

*First Baseman*—The first, second, and third basemen, and the short stop, constitute what is called the "*infield*." The first baseman usually stands about fifteen feet from first base and just back of the line between first base and second base. He is expected to stop batted balls that pass near his position, and to catch the ball whenever thrown to first base to put the runner out.

*Second Baseman*—The second baseman stands a few feet from second base, and just behind the line connecting first base and second base. His duties are similar to those of the first baseman.

*Short Stop*—The short stop stands near the line between second base and third base, and a few feet nearer to the latter than the former. He should be especially good at stopping batted balls, and at throwing accurately to the different bases. He must be very active and vigilant, for, besides playing in his own position, he is expected to "back up" the second and third basemen whenever the ball is thrown to either of them, so as to stop it in case of a wild throw, or a "muff."

*Third Baseman*—The third baseman stands within a few feet of the third base, and near the line between second base and third base. His duties are similar to those of the other basemen.

*Outfield*—The left fielder, right fielder, and center fielder constitute what is known as the "*outfield*." Their positions remain relatively the same, but are continually changing according to their judgment.

The left fielder stands well back of the line connecting second and third bases, and nearer to the latter than the former. The center fielder stands at a varying distance back of second base. The right fielder stands in a position corresponding to that of the third baseman, back of the line, between first and second bases.

The duties of the three outfielders are similar. They should be able to make long, accurate throws, and should be good judges of batted balls, especially *flies*. Since each of them is held responsible for a large amount of field space, they are required to be very active, and must exercise good judgment in deciding the positions they are to occupy for each of the different batsmen, and the player to whom it is best to throw the ball when it comes into their possession. The outfielders are expected to "back up" the players of the infield who are nearest to them; for instance, if the ball be thrown to the first baseman and is missed by him, the right fielder is expected to stop it and to throw it in time to prevent the runner from making a base.

From the foregoing brief description of the duties of the various players it is seen that at no time in the game is any player of the fielding side idle. Each is constantly on the alert, and at some time during the game each has opportunities to distinguish himself by good plays both at the bat and in the field. The game is fair, manly, honorable, and exciting, and well deserves the place it has held for so many years in the estimation of the American people.

# GLOSSARY OF TECHNICAL TERMS

*Assist*—Any fielder coöperating with another or others in retiring a base-runner is credited with an *assist*.

*Balk*—When a pitcher, with a view to deceiving the batsman, makes a motion as if to pitch the ball to him, and fails to do so, the umpire must declare a *balk*.

*Ball*—A pitched ball that does not pass over the home plate at an altitude not higher than the batsman's shoulder, nor lower than his knee, must be declared a *ball*, provided the batsman does not strike at it.

*Base Hit*—Any ball so hit that it cannot be fielded in time to prevent the batsman from reaching his base.

*Base on Balls*—A base accorded the batsman when the pitcher has delivered four "balls."

*Batsman's Box*—The space on either side of the home plate in which the batsman must stand.

*Battery*—The pitcher and catcher.

*Block Ball*—A ball in play touched by a spectator or by one of the batting side when not actively engaged in the game.

*Bunt Hit*—A ball deliberately batted so slowly to the infield that it cannot be fielded in time to put out the base-runner.

*Coacher's Box*—The space in foul territory near first and third bases devoted to the use of the coaches.

*Dead Ball*—A ball delivered by the pitcher which, when it has not been struck at, touches any part of the batsman's person or clothing, or any part of the umpire's person or clothing, while on foul ground, without first passing the catcher.

*Diamond*—The ground is so called on account of its shape.

*Double Play*—A play in which the ball is handled quickly enough to retire two men.

*Earned Run*—When the round of bases is made without the help of a fielder's error, the run is "earned."

*Error*—The mistake of a fielder which helps the opposing side.

*Fair Ball*—A ball passing over the home plate not higher than the batsman's shoulder, nor lower than his knee.

*Fair Hit*—A ball batted within the foul lines and remaining in that territory till it has passed first and third bases, or a ball batted outside the foul line which rolls inside before passing first or third base.

*Fly Ball*—A ball batted into the air.

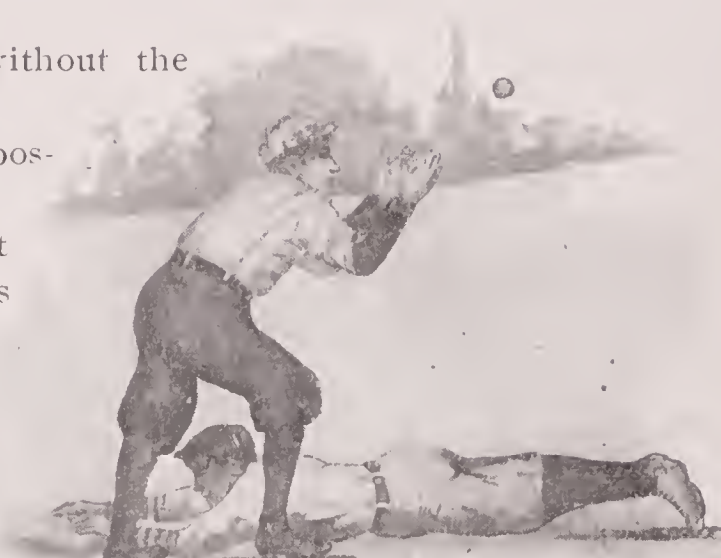
*Forced Out*—When a base-runner is compelled to make room for his successor, and is touched by the ball held by a fielder, or cannot reach the next base as soon as the fielder holding the ball.

*Foul Ball*—A ball batted into foul ground, except in the case of a foul tip (which see).

*Foul Lines*—The lines running from the home plate through the first and third bases to the extremity of the field.

*Foul Strike*—A ball batted by the batsman out of position, or a ball bunted which rolls into foul ground.

*Foul Tip*—A foul hit that does not rise above the batsman's head, and is caught by the catcher within ten feet of the plate.





*Home Run*—A complete circuit of the bases made on a hit without the help of a fielder's error.

*Infield*—First, second, and third basemen and short stop.

*Outfield*—Right, center, and left fielders.

*Passed Ball*—A pitched ball which passes the catcher and allows base-runner to advance a base.

*Plate*—The home base.

*Pitcher's Box*—The space in which the pitcher stands when delivering a ball to the batsman.

*Sacrifice Hit*—When the batsman purposely hits a ball in such a way that he is put out, in order that he may advance a base-runner.

*Shut Out*—An inning in which a side does not score a run.

*Slide*—When a base-runner, to avoid being put out, slides feet or head foremost to a base.

*Stolen Base*—A base obtained by a runner without help from a hit by a batsman.

*Strike*—When the batsman tries and fails to hit a ball delivered by a pitcher, or when he does not strike at a fair ball.

*Strike Out*—A batsman "strikes out" when three strikes have been called on him and he is put out.

*Triple Play*—A play in which the ball is handled quickly enough to retire three men.

*Wild Pitch*—A ball pitched out of the reach of the catcher, which allows a base-runner to advance a base or bases.

*Wild Throw*—A ball thrown out of reach of the fielder to whom it was directed.

## RULES

FOLLOWING are the rules of Baseball as adopted by the National League and the American Association of Professional Baseball Clubs:—

### RULE 1—THE BALL GROUND

The ground must be an inclosed field, sufficient in size to enable each player to play in his position as required by these rules.

### RULE 2

To lay off the lines governing the positions and the play of the game known as Baseball proceed as follows (Figs. 1 and 2):—From a point A, within the grounds, project a right line out into the field, and at a point B, one hundred and fifty-four feet from point A, lay off lines BC and BD at right angles to the line AB; then, with B as a center and 63.63945 feet radius, describe arcs cutting the line BA at F and BC at G, BD at H and BE at I. Draw lines FG, GI, IH, and HF, and these lines will be the containing lines of the diamond or infield.

### RULE 3—THE CATCHER'S LINES

With F as center and ten feet radius, describe an arc cutting line FA at L, and drawing lines LM and LO at right angles to FA, continue them out from FA not less than ten feet.

### RULE 4—THE FOUL LINE

From the intersection point F, continue the straight lines FG and FH until they intersect the lines LM and LO, and then from the points G and H in the opposite direction until they reach the boundary lines of the grounds.

### RULE 5—THE PLAYERS' LINES

With F as center and fifty feet radius, describe arcs cutting lines FO and FM at P and Q; then with F as center again and seventy-five feet radius, describe arcs cutting FG and FH at R and S; then, from the points P, Q, R, and S draw lines at right angles to the lines FO, FM, FG, and FH, and continue them until they intersect at the points T and W.

### RULE 6—THE CAPTAIN'S AND COACHERS' LINES

With R and S as centers and fifteen feet radius, describe arcs cutting lines RW and ST at X and Y, and from the points X and Y draw lines parallel to lines FH and FG, and continue them out to the boundary lines of the ground.

### RULE 7—THE THREE-FOOT LINE

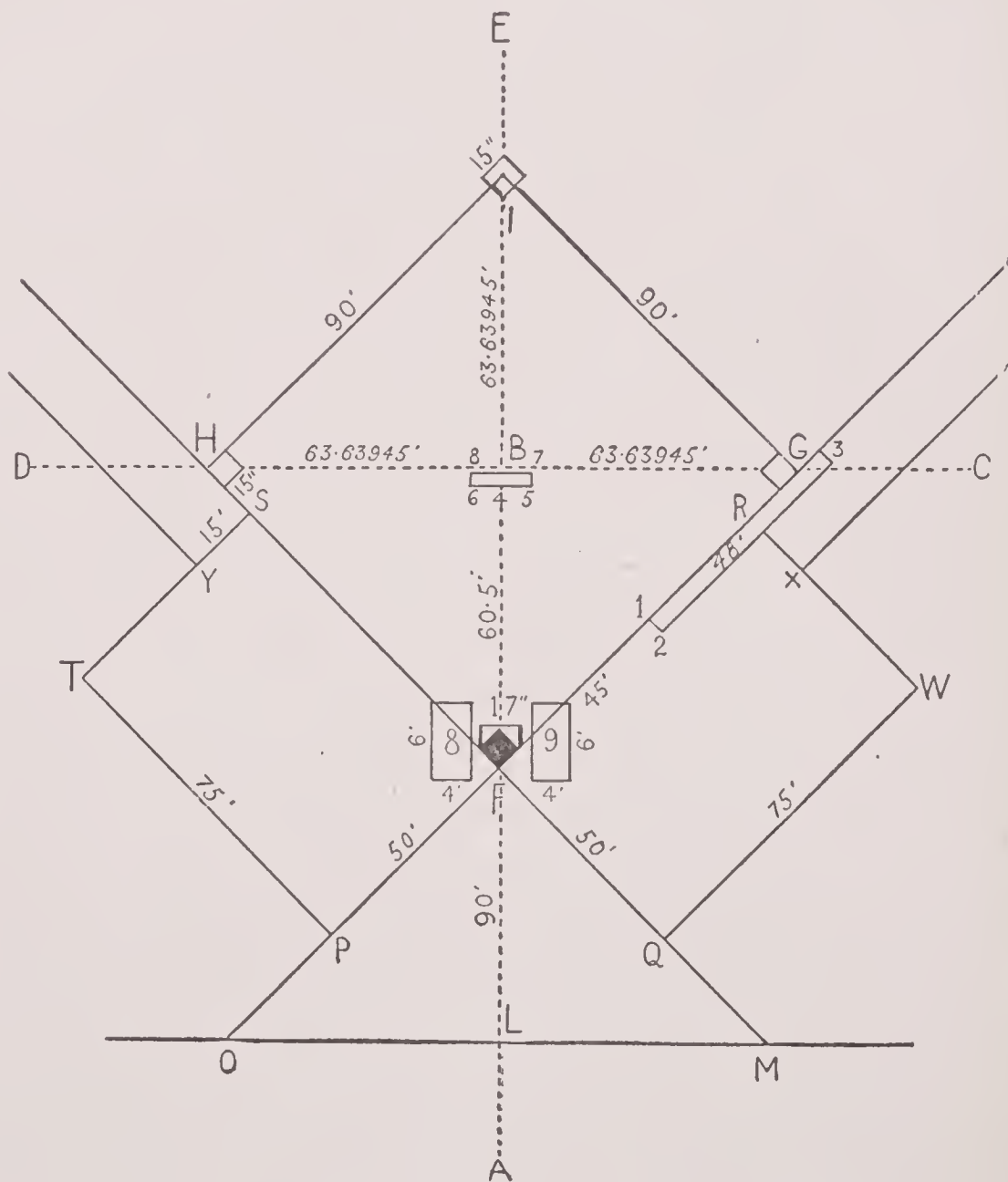
With F as center and forty-five feet radius, describe an arc cutting line FG at 1, and from 1 draw a three-foot line at right angles to FG, to point marked 2; then, from point 2, draw a line parallel to the line FG to a point three feet beyond the point G, marked 3; then, from point 3 draw a line at right angles to line 2, 3, back to and intersecting line FG, and thence back along line GF to point 1.

### RULE 8—THE PITCHER'S PLATE

With point F as center and 60.5 feet radius, describe an arc cutting the line FB at the point marked 4, and draw line 5, 6, perpendicular to FB, passing through point 4 and extending twelve inches on either side of it; then with line 5, 6, as a side, describe a parallelogram twenty-four inches by six inches.

### RULE 9—THE BASES

Within angle F describe a five-sided figure, two of the sides of which shall coincide with the lines FG and FH to the extent of twelve inches, thence parallel to the line FB eight and one-half inches; a straight line between the ends of these lines—seventeen inches long—will form the front of the plate. Within angles G and H describe squares, the sides of which shall be fifteen inches;





let the two outer sides of the squares lie on lines FG and GI, and FH and HI, respectively, and at angle I describe a square whose sides shall be fifteen inches and shall be parallel to GI and IH, and have its center immediately over the angular point E.

#### RULE 10—THE BATSMAN'S LINE

On either side of the line AFB, describe two parallelograms six feet long and four feet wide (marked 8 and 9), with their length parallel to the line AFB, their distance apart six inches added to each end of the diagonal of the square within the angle F, and the center of their length on the diagonal.

#### RULE 11

The Home Base at F and the Pitcher's Plate at 4 must be of whitened rubber, and so fixed in the ground as to be even with the surface.

#### RULE 12

The First Base at G, the Second Base at I, and the Third Base at H, must be of white canvas bags, filled with soft material and securely fastened in their positions described in Rule 9.

#### RULE 13—MARKING THE LINES

The lines described in Rules 3, 4, 5, 6, 7, and 10 must be marked with lime, chalk, or other suitable material, so as to be distinctly seen by the umpire.

#### RULE 14—THE BALL

SECTION 1. The ball must weigh not less than five, nor more than five and one-quarter ounces avoirdupois, and must measure not less than nine, nor more than nine and one-quarter inches in circumference. The Spalding League Ball or the Reach American Association Ball must be used in all games played under these rules.

SEC. 2. For each championship game, two regulation balls shall be furnished to the umpire by the home club. When the ball in play is batted to foul ground and out of sight of the umpire, the other shall immediately be brought into play. As often as one of the two in use shall be lost, a new one must be substituted, so that the umpire shall at all times after the game begins have two balls in his possession ready for use. The moment an umpire delivers an alternate ball to the pitcher, it comes into play, and shall not be exchanged until it, in turn, passes out of sight to foul ground. At no time shall the ball be discolored intentionally by rubbing it with soil or in any other manner. In the event of a new ball being discolored intentionally, or otherwise injured by a player, the umpire, on appeal from the captain of the opposite side, shall forthwith demand the return of that ball, and shall substitute another new ball and impose a fine of five dollars on the offending player.

SEC. 3. In all games the balls played with shall be furnished by the home club, and the last ball in play shall become the property of the winning club. Each ball to be used in championship games shall be examined, measured, and weighed by the Secretary of the League, inclosed in a paper box, and sealed with the seal of the Secretary, which seal shall not be broken, except by the umpire, in the presence of the captains of the two contesting nines after play has been called. The home club shall have at least a dozen regulation balls on the field ready for use on the call of the umpire during each championship game.

SEC. 4. Should the ball become cut or ripped so as to expose the interior, or in any way so injured that, in the opinion of the umpire, it is unfit for use, he shall, on appeal by either captain, at once put the alternate ball into play and call for a new ball.

#### RULE 15—THE BAT

The bat must be entirely of hard wood, except that the handle may be wound with twine, or fitted with a granulated substance not to exceed eighteen inches from the end. It must be round, and must not exceed two and three-quarters inches in diameter in the thickest part, or forty-two inches in length.

#### RULE 16—THE PLAYERS

The players of each club in a game shall be nine in number, one of whom shall act as captain, and in no case shall less than nine men be allowed to play on each side.

#### RULE 17—POSITIONS

The Players' positions shall be such as may be assigned them by their captain, except that the pitcher, while in the act of delivering the ball to the bat, must take his position as defined in Rules 8 and 29; and the catcher must stand within the lines of his position, as defined in Rule 3, whenever the pitcher delivers the ball to the bat, and within ten feet of the home base.



#### RULE 18—REGULATION

Players in uniform shall not be permitted to occupy seats on the stands, or to stand among the spectators.

#### RULE 19—UNIFORMS

SECTION 1. Every club shall adopt a uniform for its players, and the suits of each team shall be similar in color and style. No player who shall attach anything to the soles or heels of his shoes other than the ordinary baseball shoe-plates, or who shall appear in a uniform not conforming to the suits of the other members of his team, shall be permitted to take part in the game.

SEC. 2. The catcher and first baseman are permitted to wear a glove or mit of any size, shape or weight. All other players are restricted to the use of a glove or mit weighing not more than ten ounces, and measuring in circumference around the palm of the hand not more than fourteen inches.

#### RULE 20—THE PLAYERS' BENCHES

SECTION 1. The players' benches must be furnished by the home club, and placed upon a portion of the ground not less than twenty-five feet outside the players' lines. One such bench shall be for the exclusive use of the visiting club, and one for the exclusive use of the home club. The benches must be covered by a roof and closed at the back and at each end; a space, however, not more than six (6) inches in width may be left just below the roof for ventilation. All players of the side at bat must be seated on their bench, except such as are legally assigned to coach base-runners, and the batsman when called to the bat by the umpire, and under no circumstances shall the umpire permit any person, except managers and players in uniform, to occupy seats on the benches.



SEC. 2. To enforce this rule, the captain of the other side may call the attention of the umpire to a violation, whereupon the umpire shall immediately order such player or players to be seated. If the order be not obeyed within one minute, the offending player or players shall be fined five dollars each by the umpire. If the order is not then obeyed within one minute, the offending player or players shall be disbarred from further participation in the game, and shall be obliged to leave the playing field forthwith.

#### RULE 21—THE GAME

SECTION 1. Every championship game must be commenced not later than two hours before sunset.

SEC. 2. A game shall consist of nine innings for each contesting nine, except that: (a) If the side first at bat scores less runs in nine innings than the other side has scored in eight innings, the game shall then terminate. (b) If the side last at bat in the ninth inning scores the winning run before the third man is out, the game shall terminate.

#### RULE 22.—A TIE GAME

If the score be a tie at the end of the nine innings, play shall be continued until one side has scored more runs than the other in an equal number of innings, provided that the side last at bat scores the winning run before the third man is out; the game shall then terminate.

#### RULE 23—A DRAWN GAME

A drawn game shall be declared by the umpire when he terminates a game on account of darkness or rain, after five equal innings have been played, if the score at the time is equal on the last even innings played; except, when the side that went second to bat is then at the bat, and has scored the same number of runs as the other side, in which case the umpire shall declare the game drawn without regard to the score of the last equal innings.

#### RULE 24—A CALLED GAME

If the umpire "calls" the game on account of darkness or rain at any time after five innings have been completed, the score shall be that of the last equal innings played, but if the side second at bat shall have scored in an unequal number of innings, or before the completion of its unfinished inning one or more runs more than the side at bat, the score of the game shall be the total number of runs made.

#### RULE 25—A FORFEITED GAME

A forfeited game shall be declared by the umpire in favor of the club not in fault, at the request of such club, in the following cases:—

SECTION 1. If the players of a club fail to appear upon the field, or, being upon the field, fail to begin the game within five minutes after the umpire has called "Play" at the hour appointed for the beginning of the game, unless such delay in appearing, or in commencing the game, be unavoidable.

SEC. 2. If, after the game has begun, one side refuses or fails to continue playing, unless such game has been suspended or terminated by the umpire.

SEC. 3. If, after play has been suspended by the umpire, one side fails to resume playing within one minute after the umpire has called "Play."

SEC. 4. If a team resorts to dilatory tactics to delay the game.

SEC. 5. If, in the opinion of the umpire, any one of the rules of the game is wilfully violated.

SEC. 6. If, after ordering the removal of a player, as authorized by Rules 20, 52, and 58, said order is not obeyed within one minute.

SEC. 7. If because of removal of players in either team by the umpire, there be less than nine players in either team.

SEC. 8. If, when two games are scheduled to be played on the same afternoon, the second game is not commenced within ten minutes of the time of completion of the first game. The umpire of the first game shall be timekeeper.

SEC. 9. In case the umpire declares the game forfeited, he shall transmit a written notice thereof to the President of the League within twenty-four hours thereafter. However, a failure on the part of the umpire to so notify the President shall not affect his decision declaring the game forfeited.

#### RULE 26—NO GAME

"No game" shall be declared by the umpire if he shall terminate play on account of rain or darkness before five innings on each side are completed. Except in case the game is called, and the club second at bat shall have more runs at the end of its fourth inning than the club first at bat has made in its five completed innings; in such case the umpire shall award the game to the club having made the greater number of runs, and it shall be a legal game and shall be so counted, in the championship record.

#### RULE 27—SUBSTITUTES

SECTION 1. In any championship game, each side shall be required to have present on the field, in uniform conforming to the suits worn by their team mates, a sufficient number of substitute players to carry out the provision which requires that not less than nine players shall occupy the field in any inning of a game.

SEC. 2. Any such player may be substituted at any time by either club, but a player thereby retired shall not thereafter participate in the game.

SEC. 3. A base-runner shall not have a substitute run for him except with the consent of the captains of the contesting teams.

#### RULE 28—CHOICE OF INNINGS—CONDITION OF GROUND

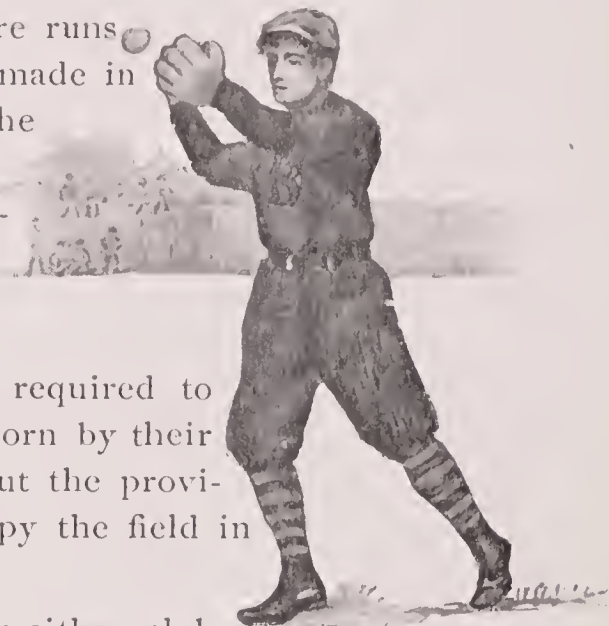
The choice of innings shall be given to the captain of the home club, who shall also be the sole judge of the fitness of the ground for beginning a game after rain, but after the umpire has called play, he alone shall be judge as to the fitness of the ground for resuming play after the game has been suspended on account of rain.

#### RULE 29—THE PITCHER'S POSITION

The pitcher shall take his position facing the batsman with both feet square on the ground, and behind the pitcher's plate; but in the act of delivering the ball to the bat, one foot must be in contact with the pitcher's plate, defined in Rule 8. He shall not raise either foot, unless in the act of delivering the ball to the bat, nor make more than one step in such delivery.

#### RULE 30—A FAIRLY DELIVERED BALL

A fairly delivered ball to the bat is a ball pitched or thrown to the bat by the pitcher while standing in his position and facing the batsman, the ball so delivered to pass over any portion of the home base not lower than the batsman's knee nor higher than his shoulder.





## RULE 31—AN UNFAIRLY DELIVERED BALL

An unfairly delivered ball is a ball delivered by the pitcher, as in Rule 30, except that the ball does not pass over any portion of the home base, or does pass over the home base above the batsman's shoulder or below the line of his knee, in which case the umpire shall call one ball.

## RULE 32

SECTION 1. If the ball is thrown by the pitcher to any player other than the catcher (except to retire a base-runner) and the batsman is standing in his proper position ready to strike at a pitched ball, each ball so delivered shall be called a ball.

SEC. 2. The umpire shall call a ball on the pitcher each time he delays the game by failing to deliver the ball to the batsman when in position for a longer period than twenty seconds.

## RULE 33—BALKING

A balk shall be:—

SECTION 1. Any motion made by the pitcher to deliver the ball to the bat or to first base without delivering it.

SEC. 2. The throwing of the ball by the pitcher to any base to catch the base-runner without first stepping directly toward said base immediately before throwing the ball.

SEC. 3. Any delivery of the ball to the bat by the pitcher while his (pivot) foot is not in contact with the pitcher's plate, and he is not facing the batsman, as defined in Rule 29.

SEC. 4. Any motion in delivering the ball to the bat by the pitcher while not in the position defined in Rule 29.

SEC. 5. Standing in position and making any motion to pitch without having the ball in his possession.

SEC. 6. The making of any motion which the pitcher habitually makes in his method of delivery, without his immediately delivering the ball to the bat.

SEC. 7. If the pitcher delivers the ball to the bat when the catcher is standing outside the lines of the catcher's position, as defined in Rule 3.

If the pitcher fails to comply with the requirements of any section of this rule, the umpire must call a "balk."

## RULE 34—DEAD BALLS

A dead ball is a ball delivered to the bat by the pitcher which, without being struck at, touches any part of the batsman's person or clothing while standing in his position, or which touches any part of the umpire's person or clothing while he is standing on foul ground, without first passing the catcher.

## RULE 35—BALL NOT IN PLAY

In case of a foul strike, foul-hit ball not legally caught out, dead ball, or base-runner put out for being struck by a fair-hit ball, the ball shall not be considered in play until it is held by the pitcher standing in his position, and the umpire shall have called play.

## RULE 36—BLOCK BALLS

SECTION 1. A block is a batted or thrown ball that is touched, stopped, or handled by any person not engaged in the game.

SEC. 2. Whenever a block occurs, the umpire shall declare it, and base-runners may run the bases without being put out until the ball has been returned to and held by the pitcher standing in his position.

SEC. 3. In case of a block, if the person not engaged in the game should retain possession of the ball, or throw or kick it beyond the reach of the fielders, the umpire should call "Time," and require each base-runner to stop at the last base touched by him until the ball be returned to the pitcher standing in his position and the umpire shall have called "Play."

## RULE 37—THE BATSMAN'S POSITION—ORDER OF BATTING

The batsmen must take their position within the batsman's lines, as defined in Rule 10, in the order in which they are named in the batting order, which batting order must be submitted by the captains of the opposing teams to the umpire, before the game, and this batting order must be followed, except in the case of a substitute player, in which case the substitute must take the place of the original player in the batting order. After the first inning, the first striker in each inning shall be the batsman whose name follows that of the last man who has completed his turn, or time at bat, in the preceding inning.

## RULE 38—POSITION OF PLAYERS, SIDE AT BAT

SECTION 1. When a side goes to the bat the players must immediately return to the players' bench, as defined in Rule 20, and remain there until the side is put out, except when called to the bat, or when they become coachers or substitute base-runners; provided, that the captain or one player only,—except that if two or more base-runners are occupying the bases, then the captain and either one or two players,—may occupy the space between the players' lines and the captain's lines, to coach base-runners.

SEC. 2. No player of the side at bat, except when batsman, shall occupy any portion of the space within the catcher's lines, as defined in Rule 3. The triangular space behind the home base is reserved for the exclusive use of the umpire, catcher, and batsman, and the umpire must prohibit any player of the side at bat from crossing it at any time while the ball is in the hands of, or passing between, the pitcher and catcher, while standing in their positions.

SEC. 3. The players of the side at bat must occupy the portion of the field allotted them, but must speedily vacate any portion thereof that may be in the way of the ball, or of any fielder attempting to catch or field it.

## RULE 39—THE BATTING RULES

SECTION 1. A fair hit is a ball batted by the batsman, while he is standing within the lines of his position, that first touches "fair" ground, or the person of a player, or the umpire, while standing on fair ground, and then settles on fair ground before passing the line of first or third base.

SEC. 2. A foul hit is a similarly batted ball that first touches "foul" ground, or the person of a player, or the umpire, while standing on foul ground.

SEC. 3. Should such fair-hit ball bound or roll to foul ground, before passing the line of first or third base, and settle on foul ground, it shall be declared by the umpire to be a foul ball.



SEC. 4. Should such foul-hit ball bound or roll to fair ground and settle there before passing the line of first or third base, it shall be declared by the umpire to be a fair ball.

#### RULE 40

A foul tip is a ball batted by the batsman while standing within the lines of his position that goes foul, sharp from the bat to the catcher's hands.

#### RULE 41—BUNT HIT

A bunt hit is a ball delivered by the pitcher to the batsman who, while standing within the lines of his position, makes a deliberate attempt to hit the ball so slowly within the infield that it cannot be fielded in time to retire the batsman. If such a bunt hit goes to foul ground, a strike shall be called by the umpire.

#### RULE 42—BALLS BATTED OUTSIDE THE GROUNDS

When a batted ball passes outside the grounds, the umpire shall decide that it is "fair" should it disappear within, or "foul" should it disappear without, the range of the foul lines, and Rule 39 is to be construed accordingly.

#### RULE 43—FAIR BALL OVER FENCE

A fair-batted ball that goes over the fence shall entitle the batsman to a home run, except, that should it go over the fence at a less distance than two hundred and thirty-five (235) feet from the home base, he shall be entitled to two bases only, and a distinctive line shall be marked on the fence at this point.

#### RULE 44—STRIKES

A Strike is:—

SECTION 1. A ball struck at by the batsman without his bat touching it.

SEC. 2. A fair ball legally delivered by the pitcher, but not struck at by the batsman.

SEC. 3. A foul-hit ball not caught on the fly, unless two strikes have already been called.

SEC. 4. A bunt hit, which sends the ball to foul ground, either directly, or by bounding or rolling from fair ground to foul ground, and which settles on foul ground.

SEC. 5. A ball struck at, if the ball touches any part of the batsman's person.

SEC. 6. A foul tip by the batsman, caught by the catcher while standing within the lines of his position.

#### RULE 45—FOUL STRIKE

A foul strike is a ball batted by the batsman when any part of his person is upon ground outside the lines of the batsman's position.

#### RULE 46—THE BATSMAN IS OUT

The batsman is out:—

SECTION 1. If he fails to take his position at the bat in his order of batting, unless the error is discovered and the proper batsman takes his position before a time at bat is recorded. In such case, the balls and strikes called must be counted in the time at bat of the proper batsman, and only the proper batsman shall be declared out; and no runs shall be scored or bases run because of any act of the improper batsman, provided this rule shall not take effect unless the out is declared before the ball is delivered to the succeeding batsman. Should a batsman declared

out by this rule, be sufficient to retire the side, the proper batsman at the beginning of the next inning is the player who would have come to bat, had the players been out by ordinary play.

SEC. 2. If he fails to take his position within one minute after the umpire has called for the batsman.

SEC. 3. If he makes a foul hit other than a foul tip, as defined in Rule 40, and the ball be momentarily held by a fielder before touching the ground; provided, it be not caught in a fielder's hat or cap, or touched by some object other than a fielder before being caught.

SEC. 4. If he makes a foul strike.

SEC. 5. If he attempts to hinder the catcher from fielding, or throwing the ball by stepping outside the lines of the position, or otherwise obstructing or interfering with the player.

SEC. 6. If, while the first base is occupied by a base-runner, three strikes be called on him by the umpire, except when two men are already out.

SEC. 7. If, while attempting a third strike, the ball touches any part of the batsman's person, in which case base-runners occupying bases shall return as prescribed in Rule 45, Section 5.

SEC. 8. If he hits a fly ball that can be handled by an infielder while first and second bases are occupied, or first, second, and third bases, unless two hands are out. In such case the umpire shall, as soon as the ball is hit, declare infield or outfield hit.

SEC. 9. If the third strike is called in accordance with Section 5, Rule 44.

SEC. 10. The moment a batsman is declared out by the umpire, he (the umpire) shall call for the batsman next in order to leave his seat on the bench and take his position at the bat, and such player of the batting side shall not leave his seat on the bench until so called to bat, except as provided by Rule 38, Section 1, and Rule 53.

## BASE-RUNNING RULES

### RULE 47—WHEN THE BATSMAN BECOMES A BASE-RUNNER

The batsman becomes a base-runner:—

SECTION 1. Instantly after he makes a fair hit.

SEC. 2. Instantly after four balls have been called by the umpire.

SEC. 3. Instantly after three strikes have been declared by the umpire.

SEC. 4. If, while he is a batsman, the catcher interferes with him and prevents him from striking the ball.

### RULE 48—BASES TO BE TOUCHED

The base-runner must touch each base in regular order, *viz.*, first, second, third, and home bases; and when obliged to return (except on a foul hit) must retouch the base or bases in reverse order. He shall be considered as holding a base only after touching it, and shall then be entitled to hold such base until he has legally touched the next base in order, or has been legally forced to vacate it before a succeeding base-runner. However, no base-runner shall score a run to count in the game until the base-runner preceding him in the batting list (provided there has been such a base-runner who has not been put out in that inning) shall have first touched home base without being put out.



### RULE 49—ENTITLED TO BASES

The base-runner shall be entitled, without being put out, to take the base in the following cases:—

SECTION 1. If, while he was batsman, the umpire called four balls.

SEC. 2. If the umpire awards a succeeding batsman a base on four balls, and the base-runner is thereby forced to vacate the base held by him.

SEC. 3. If the umpire calls a "Balk."

SEC. 4. If a ball, delivered by the pitcher, passes the catcher, and touches the umpire, or any fence or building, within ninety feet of the home base.

SEC. 5. If, on a fair hit, the ball strikes the person or clothing of the umpire on fair ground.

SEC. 6. If he is prevented from making a base by the obstruction of an adversary, unless the latter be a fielder having the ball in his hand ready to meet the base-runner.

SEC. 7. If the fielder stops or catches a batted ball with his hat or any part of his uniform except the glove on his hand.

### RULE 50—RETURNING TO BASES

The base-runner shall return to his base, and shall be entitled so to return without being put out:—

SECTION 1. If the umpire declares a foul tip (as defined in Rule 40) or any other foul hit not legally caught by a fielder.

SEC. 2. If the umpire declares a foul strike.

SEC. 3. If the umpire declares a dead ball, unless it be also the fourth unfair ball, and he be thereby forced to take the next base, as provided in Rule 49, Section 2.

SEC. 4. If the person or clothing of the umpire interferes with the catcher, or he is struck by a ball thrown by the catcher to intercept a base-runner.

SEC. 5. The base-runner shall return to his base, if, while attempting a strike, the ball touches any part of the batsman's person.

### RULE 51—WHEN BASE-RUNNERS ARE OUT

The base-runner is out:—

SECTION 1. If, after three strikes have been declared against him while batsman, and the catcher fails to catch the third strike ball, he plainly attempts to hinder the catcher from fielding the ball.

SEC. 2. If, having made a fair hit while batsman, such fair-hit ball is momentarily held by a fielder before it touches the ground or any object other than a fielder; provided it be not caught in a fielder's cap or hat.

SEC. 3. If, when the umpire has declared three strikes on him while batsman, the third strike ball is momentarily held by a fielder before touching the ground; provided it be not caught in a fielder's hat or cap, or touch some object other than a fielder before being caught.

SEC. 4. If, after three strikes or a fair hit, he is touched with the ball in the hand of a fielder before he shall have touched first base.



SEC. 5. If, after three strikes or a fair hit, the ball is securely held by a fielder while touching first base with any part of his person before such base-runner touches first base.

SEC. 6. If, in running the last half of the distance from home base to first base, while the ball is being fielded to first base, he runs outside the three-foot lines, as defined in Rule 7, unless to avoid a fielder attempting to field a batted ball.

SEC. 7. If, in running from first to second base, from second to third base, or from third base to home base, he runs more than three feet from a direct line between such bases to avoid being touched by the ball in the hands of a fielder; but in case a fielder be occupying the base-runner's proper path in attempting to field a batted ball, then the base-runner shall run out of the path, and behind said fielder, and shall not be declared out for so doing.

SEC. 8. If he fails to avoid a fielder attempting to field a batted ball, in the manner described in Sections 6 and 7 of this rule, or if he, in any way, obstructs a fielder attempting to field a batted ball, or intentionally interferes with a thrown ball; provided that if two or more fielders attempt to field a batted ball, and the base-runner comes in contact with one or more of them, the umpire shall determine which fielder is entitled to the benefit of this rule, and shall not decide the base-runner out for coming in contact with any other fielder.

SEC. 9. If, at any time while the ball is in play, he is touched by the ball in the hands of a fielder, unless some part of his person is touching a base he is entitled to occupy; provided the ball be held by the fielder after touching him.

SEC. 10. The base-runner in running to first base may overrun said base after first touching it, without being put out for being off of it, provided he return at once and retouch the base, after which he may be put out as at any other base. If, in overrunning first base, he also attempts to run to second base, or after passing the base he *turns to his left* from the foul line, he shall forfeit such exemption from being put out.

SEC. 11. If, when a fair or foul hit ball (other than a foul tip as referred to in Rule 40) is legally caught by a fielder, such ball is legally held by a fielder on the base occupied by the base-runner when such ball was struck (or the base-runner be touched with the ball in the hands of a fielder), before he retouches said base after such fair or foul hit ball was so caught; provided that the base-runner shall not be out, in such case, if, after the ball was legally caught as above, it be delivered to the bat by the pitcher before the fielder holds it on said base or touches the base-runner with it; but if the base-runner, in attempting to reach a base, reaches it before being touched or forced out, he shall be declared safe.

SEC. 12. If, when a batsman becomes a base-runner, the first base, or the first and second bases or the first, second, and third bases, be occupied, any base-runner so occupying a base shall cease to be entitled to hold it, until any following base-runner is put out, and may be put out at the next base, or by being touched by the ball in the hands of a fielder in the same manner as in running to first base at any time before any following base-runner is put out.

SEC. 13. If a fair-hit ball strikes him before touching the fielder, and in such case no base shall be run unless forced to be run by the batsman becoming a base-runner, and no run shall be scored or any other base-runner put out.

SEC. 14. If, when running to a base, or forced to return to a base, he fails to touch the intervening base or bases in the order prescribed in Rule 48, he may be put out at the base he fails to touch, or by being touched by the ball in the



hands of the fielder in the same manner as in running to first base; provided that the base-runner shall not be out in such case if the ball be delivered to the bat by the pitcher before the fielder holds it on said base or touches the base-runner with it.

SEC. 15. If, when the umpire calls "Play" after any suspension of a game, he fails to return to and touch the base he occupied when "Time" was called, before touching the next base; provided the base-runner shall not be out, in such case, if the ball be delivered to the bat by the pitcher, before the fielder holds it on said base or touches the base-runner with it.

#### RULE 52—WHEN BATSMAN OR BASE-RUNNER IS OUT

The umpire shall declare the batsman or base-runner out, without waiting for an appeal for such decision, in all cases where such player is put out in accordance with these rules except as provided in Rule 51, Sections 10 and 14.

#### RULE 53—COACHING RULES

The coacher shall be restricted to coaching the base-runner only, and shall not be allowed to address any remarks except to the base-runner, and then only in words of necessary direction; and shall not, by words or signs, incite or try to incite the spectators to demonstrations; and shall not use language which will in any manner refer to or reflect upon a player of the opposite club, the umpire, or the spectators; and not more than one coacher, who may be a player participating in the game, or any other player under contract to and in the uniform of either club, shall be allowed at any one time, except, that if base-runners are occupying two or more of the bases, then the captain and one player, or two players under contract to and in the uniform of either club, may occupy the space between the players' lines and the captains' lines to coach base-runners. To enforce the above, the captain of the opposite side may call the attention of the umpire to any offense and thereupon the umpire must order the illegal coacher or coachers to the bench; if his order is not obeyed within one minute, the umpire shall assess a fine of five dollars against each offending player, and upon a repetition of the offense, the offending player or players shall be debarred from further participation in the game, and shall leave the playing field forthwith.

#### RULE 54—THE SCORING OF RUNS

One run shall be scored every time a base-runner, after having legally touched the first three bases, shall touch the home base before three men are put out. Exception: If the third man is forced out, or is put out before reaching first base, a run shall not be scored.

### THE UMPIRE AND HIS DUTIES

#### RULE 55

The umpire shall not be changed during the progress of a championship game, except by reason of personal illness or injury incapacitating him for the discharge of his duties.

#### RULE 56

The umpire is a representative of the League, and as such shall have power to enforce every section of the code of playing rules of the game, and he shall have power to order any player, or captain, or manager, to do or omit to do, any action that he may deem necessary to give force and effect to the laws of the game.

## RULE 57

There shall be no appeal from any legal decision of the umpire.

## RULE 58

Under no circumstances shall any player be allowed to dispute a decision by the umpire, in which only an error of judgment is involved; and no decision rendered by him shall be reversed, except it be plainly shown by the code of rules to have been illegal; and in such case the captain alone shall be allowed to make the appeal for reversal.

## RULE 59

SECTION 1. In all cases of violation of these rules, by either a player or manager, the penalty for the first offense shall be a fine by the umpire of five dollars, and for a second offense, prompt removal of the offender from the game or grounds, followed by such period of suspension from actual service in the club, as the president of the League may elect.

SEC. 2. The umpire, within twelve hours after fining or removing a player from the game, shall forward to the president a report of the action and the causes therefor.

SEC. 3. Immediately upon notification by the umpire that a fine has been imposed upon any manager, captain, or player, the president shall notify the person so fined, and also the club of which he is a member, and, in event of the failure of the person so fined to pay the secretary of the League the amount of said fine within five days of notice, he shall be debarred from participating in any championship game, or from sitting on a player's bench during the progress of a championship game, until such fine is paid.

SEC. 4. When the offense of the player debarred from the game is of a flagrant nature, such as the use of obscene language or an assault upon a player or umpire, the umpire shall, within four hours thereafter, notify the president of the League, giving full particulars.

SEC. 5. He shall also notify both captains, before the game, and in the presence of each other, that all playing rules will be impartially enforced, and that their failure to coöperate in such enforcement will result in their being fined and, perhaps, in their removal from the game.

## RULE 60

Before the beginning of a game the umpire shall see that the rules governing all the materials of the game are strictly observed. He shall ask the captain of the home club whether there are any special ground rules, and if there are, he shall see that they are duly enforced, provided they do not conflict with any of these rules.

## RULE 61

The umpire shall not only call "Play" at the hour appointed for the beginning of the game, but shall also announce "Game Called" at its legal conclusion.

## RULE 62

The umpire shall suspend play for the following causes: First, if rain is falling so heavily as to oblige the spectators on the open field and open stands to seek shelter, in which case he shall note the time of suspension; and should rain fall continuously for thirty minutes thereafter, he shall terminate the game.



## RULE 63

The umpire shall suspend play in case of accident to himself or to a player which incapacitates him from service in the field, or in order to remove from the grounds any player or spectator who has violated the rules.

## RULE 64

In suspending play for any legal reason, the umpire shall call "Time"; when he calls "Time" the play shall be suspended until he calls "Play" again, and during the interim no player shall be put out, base be run or run be scored. "Time" shall not be called by the umpire until the ball is held by the pitcher standing in his position.

## RULE 65

The umpire shall call and count as a "ball" any unfair ball delivered by the pitcher to the batsman, but not before such ball has passed the line of the home base. He shall also call and count as a "strike" any fairly delivered ball which passes over any portion of the home base, and within the batsman's legal range, as defined in Rule 44, which is not struck at by the batsman, or a foul tip which is caught by the catcher, standing within the lines of his position, or which, after being struck at and not hit, strikes the person of the batsman; or when the ball is purposely hit foul by the batsman, or when the ball is bunted foul by the batsman.

## RULE 66

No person shall be allowed upon any part of the field during the progress of a game in addition to the players in uniform, the manager of each side and the umpire, except such officers of the law as may be present in uniform, and such officials of the home club as may be necessary to preserve the peace.

## RULE 67

No manager, captain, or player, shall address the spectators during the progress of a game, except in case of necessary explanation.

## RULE 68

No manager, captain, or player, during the progress of the game, shall use indecent or improper language directed to a spectator, umpire, manager, club official or a player. A violation of this rule must be followed by the removal forthwith of the offender from the game and the grounds by the umpire on his own option, or upon the written accusation of the manager or other official of either contesting club; said removal to be followed by written proofs submitted within twenty-four hours to the President of the League, who, if the evidence warrants, shall suspend the offending manager, captain or player from actual service for a definite period of time, subject to appeal to the Board of Directors.

## RULE 69

Every club shall furnish sufficient police force upon its own grounds to preserve order, and in the event of a crowd entering a field during the progress of a game and interfering with the play in any manner, the visiting club may refuse to play further until the field be cleared. If the ground be not cleared within fifteen minutes thereafter, the visiting club may claim, and shall be entitled to, the game by a score of nine runs to none (no matter what number of innings has been played).

## GENERAL DEFINITIONS

## RULE 70

“Play” is the order of the umpire to begin the game, or to resume play after its suspension.

## RULE 71

“Time” is the order of the umpire to suspend play. Such suspension must not extend beyond the day of the game.

## RULE 72

“Game” is the announcement by the umpire that the game is terminated.

## RULE 73

An “inning” is the term at bat of the nine players representing a club in a game, and is completed when three of such players have been put out, as provided in these rules.

## RULE 74

A “time at bat” is the term at bat of a batsman. It begins when he takes his position and continues until he is put out or becomes a base-runner; except when one of these occurs because of his being hit by a pitched ball, or in case of an illegal delivery by the pitcher, or in case of a sacrifice hit purposely made to the infield, which, not being a base-hit, advances a base-runner without resulting in a put-out, except to the batsman, as in Rule 46.

## RULE 75

“Legal” or “legally” signifies as required by these rules.

## SCORING

## RULE 76

In order to promote uniformity in scoring championship games, the following instructions, suggestions and definitions are made for the benefit of scorers, and they are required to make all scores in accordance therewith.

## BATTING

SECTION 1. The first item in the tabulated score, after the player's name and position, shall be the number of times he has been at bat during the game. No time at bat shall be scored if the batsman is hit by a pitched ball while standing in his position, and after trying to avoid being so hit, or in case of the pitcher's illegal delivery of the ball to the bat which gives the batsman his base, or when he intentionally hits the ball to the field, purposely to be put out, or if he is given first base on called balls.

SEC. 2. In the second column should be set down the runs made by each player.

SEC. 3. In the third column should be placed the first-base hits made by each player. A base-hit should be scored in the following cases:—

When the ball from the bat strikes the ground within the foul lines and out of reach of the fielders.

When a hit ball is partially or wholly stopped by a fielder in motion, but such player cannot recover himself in time to handle the ball before the striker reaches first base.



When the ball is hit with such force to an infielder that he cannot handle it in time to put out the batsman. (In case of doubt over this class of hits, score a base-hit and exempt the fielder from the charge of an error.)

When a ball is hit so slowly toward a fielder that he cannot handle it in time to put out the batsman.

In all cases where a base-runner is retired by being hit by a batted ball, the batsman should be credited with a base-hit.

When a batted ball hits the person or clothing of the umpire, as defined in Rule 49, Section 5. In no case shall a base-hit be scored when a base-runner has been forced out by the play.

SEC. 4. In the fourth column shall be placed the sacrifice hits, which shall be credited to the batsman who, when no one is out or when but one man is out, advances a runner a base by a bunt hit, which results in putting out the batsman, or would so result if the ball were handled without error.

#### FIELDING

SEC. 5. The number of opponents put out by each player shall be set down in the fifth column. Where a batsman is put out by the umpire for a foul strike, or where the batsman fails to bat in proper order, the put-out shall be scored to the catcher. In all cases of "out" for interference, running out of line, or infield fly dropped, the "out" should be credited to the player who would have made the play, but for the action of the base-runner or batsman.

SEC. 6. The number of times the player assists shall be set down in the sixth column. An assist should be given to each player who handles the ball in assisting a run out or other play of the kind.

An assist should be given to a player who makes a play in time to put a runner out, even if the player who could complete the play fails through no fault of the player assisting.

And, generally, an assist should be given to each player who handles, or assists in any manner in handling, the ball from the time it leaves the bat until it reaches the player who makes the put-out, or, in case of a thrown ball, to each player who throws or handles it cleanly and in such a way that a put-out results, or would result if no error were made by the receiver.

Assists should be credited to every player who handles the ball in the play which results in a base-runner being called out for interference or for running out of line.

#### ERRORS

SEC. 7. An error shall be given in the seventh column for each misplay, which allows a striker or base-runner to make one or more bases when perfect play would have insured his being put out, except that "wild pitches," "bases on balls," bases on the batsman being struck by a "pitched ball," or in case of illegally pitched balls, balks, and passed balls, all of which comprise battery errors, shall not be included in said column. In scoring errors of batted balls, see Section 3 of this rule.

An error shall not be scored against the catcher for a wild throw to prevent a stolen base, unless the base-runner advances an extra base because of the error.

No error shall be scored against an infielder who attempts to complete a double play, unless the throw is so wild that an additional base is gained.

#### STOLEN BASES

A stolen base shall be credited to the base-runner whenever he reaches the base he attempts to steal unaided by a fielding or a battery error or a hit by the batsman.

## RULE 77—THE SUMMARY

The Summary shall contain:—

SECTION 1. The score made in each inning of the game.

SEC. 2. The number of bases stolen by each player.

SEC. 3. The number of two-base hits made by each player.

SEC. 4. The number of three-base hits made by each player.

SEC. 5. The number of home runs made by each player.

SEC. 6. The number of double and triple plays made by each side and the names of the players assisting in the same.

SEC. 7. The number of innings in which each pitcher pitched.

SEC. 8. The number of base-hits made off each pitcher.

SEC. 9. The number of times the pitcher strikes out the opposing batsmen.

SEC. 10. The number of times the pitcher gives bases on balls.

SEC. 11. The number of wild pitches charged to the pitcher.

SEC. 12. The number of times the pitcher hits batsmen with the pitched ball.

SEC. 13. The number of passed balls for which each catcher is responsible.

SEC. 14. The time of the game.

SEC. 15. The name of the umpire.

## FOOTBALL

LONG before Rugby Football became known in this country, it was one of the most popular sports in many of the English schools and universities. Scarcely a quarter of a century has passed since the development of the modern game began in America, and it was not until the early eighties that it acquired special prominence in college athletics. In the beginning, the progress of the game was slow, and the first matches, which were played by Harvard and Yale, aroused little interest. But the possibilities of Football soon became apparent, and some of its early enthusiasts set to work to perfect the rules and methods of play.

The history of the gradual development of the game is an interesting one, and is well worth perusal. The changes in the methods of the game have been many. In the sport which to-day is so popular in the schools and colleges of every state and territory, there is little resemblance to the football of twenty years ago. However, the limit of space assigned to this article will per-





mit only a brief description of the game in its latest form. The story of its development and of the evolution in tactics and play may be found in books or magazine articles devoted solely to that subject.

If a novice wishes to acquire a clear understanding of the game, to say nothing of learning to play it, two things are essential: He should read the rules carefully and, if possible, he should secure opportunities of watching a team at practice. There are many of the finer points of play that must be seen to be understood, and while the rules have been so far perfected that they describe the game clearly, actual experience is, of course, the best instructor.

### THE FIELD

THE first necessity is a suitable field, which should be smooth and comparatively level, and covered with turf. This field is first marked with ordinary lime lines (Fig. 1) which form a rectangle three hundred and thirty feet in length by one hundred and sixty feet in width. Twenty-five yards from the lines at each end, or goal, and parallel to them, are what are known as the "twenty-five-yard lines." It is also customary, though not necessary, to mark the entire field with parallel transverse lines, five yards apart. The goal posts are placed upright in the middle of the goal lines, and should be eighteen and one-half feet apart, with a cross-bar ten feet from the ground. The goal posts should project several feet above the cross-bar.

### THE BALL

THE ball (Fig. 2) is oval in shape, and is composed of a leather cover inclosing an inner "bladder" of thin rubber, which is inflated with air by means of a small air pump or the lungs.

### THE TEAM

A FOOTBALL team is composed of eleven men, and is usually divided into seven rushers, or forwards, who stand in line facing the seven forwards of the opposing team; a quarter-back, who stands just behind the rush line; two half-backs, behind and on opposite sides of the quarter-back; and a full-back, who stands directly behind the quarter-back and back of the half-backs. This formation is, of course, varied greatly in the different plays. The seven men of the rush line are designated, respectively, beginning at the right, right end, right tackle, right guard, center, left guard, left tackle, and left end.

### THE UNIFORMS

THE costumes of the players are perhaps the most important accessories of the game. They must be strong and serviceable, and, at the same time, should be made and padded so as to go far toward protecting

the players from injury. Sleeveless jackets of canvas are often worn over jerseys, or the jackets are omitted and the jerseys are reinforced with leather. The canvas jacket is made to fit snugly and is laced up in front. Elastic pieces are sometimes inserted at the sides and back, and sleeves are worn; but these are by no means necessary. The trousers are of some strong material, such as fustian, and are generally padded over the knees and hips.

The jackets and trousers may be home-made and padded, or may be purchased cheaply from any athletic outfitter. Long woolen stockings are always worn, and shin guards form a desirable protection, especially for the players in the rush line. The shoes are the most important feature of the player's outfit. These may be either the every-day laced shoe or canvas baseball shoe, with strips of leather nailed across the soles to prevent slipping, or regular Football shoes may be worn. These are of medium-weight leather, fit the foot closely, lace high up on the ankle, and are provided with leather spikes, which are preferable to the leather strips.

Thin leather ankle-supports are sometimes worn inside the shoe, and furnish good protection against sprained ankles. Caps are not often worn, except when used by the backs to protect their eyes from the sun. The long "Football hair," which has become inseparably associated with this game, is the best sort of head protector. It is unnecessary to describe the numerous devices which are often used to protect the players from injury, since we are to confine ourselves to the essentials of the game. Nose guards, head harness, shoulder shields, and the like are luxuries rather than necessities.

## THE GAME

BEFORE beginning the game, the captains of the two contesting teams should select a referee, an umpire, and a linesman, though in practice games one man may perform the duties of all these officials. The captains then toss for choice of goals, and the winner may elect to have first possession of the ball or to select a goal. If there be an advantage in goals due to wind or position, he will naturally prefer the choice of goals, and will give the opponent possession of the ball.

The ball is then placed on the ground in the center of the field (Fig. I.), and the players of the two teams take the positions indicated in Figure III, or are stationed as the judgment of the captains may lead them to think advisable. The side having possession of the ball is said to have the *kick off*, and one of the players of that side must kick the ball so as to send it at least ten yards into the opponent's territory. The players of either side must not cross the center line of the field until after the ball is kicked.

The player who kicks it tries to send it as far as possible into the opponent's territory, but not across the side lines, so that some of the players of his side may get near the ball before the opponents secure possession of it. When the kick is made, all but two or three of the side having the



kick off charge down the field in the direction taken by the ball, and the foremost players of the opposing side endeavor to block them until some player of that side secures possession of the ball. When he has done this, he either returns it by a kick, or runs with it toward the kicker's goal. If he runs with it, he may be tackled and held by any of his opponents, and as soon as the ball is "down," that is, both player and ball are stopped, the referee blows his whistle and the ball is temporarily dead.

Some player of the runner's side, usually the center-rush, or "snap-back," then places the ball on the ground at the point where it was held and the two teams line up for a "scrimmage." The players assume the position shown in Figure IV, or place themselves as their judgment may dictate, and the ball is put in play by the center-rush who "snaps it back" with his hand to the quarter-back. The most common method of snapping the ball back for a scrimmage is by holding one end in the hand and pressing the other on the ground between the legs of the center-rush so that when the ball is given a quick backward push and released, it will bound up and be caught in the hands of the quarter-back. He then passes it to one of the other players of his side, who, however, must be farther from the opponents' goal line than the quarter-back at the time of receiving it, and that player either kicks it or runs with it toward the opponents' goal.

Both sides press forward as soon as the ball is put in play, the object of the opponents being to tackle the runner or prevent the kick, and that of the runner's side to prevent the tackle or secure the kick. It is regarding this part of the game that the most arbitrary rules have been made regarding the use of the hands, body, and arms of the contestants. When the snap-back sends the ball behind him, he places all of the men in his rush line "off-side," that is between the ball and the opponents' goal, while all of the opponents are on the "on-side"; theoretically, therefore, the playing side may not advance from their first positions, while their opponents have the right to push forward, and are prevented from doing so only by being blocked by their antagonists. For this reason, the rules provide that the side having possession of the ball may not use their hands or arms in blocking, but that their opponents, in their endeavor to stop the runner or secure possession of the ball, may use their hands and arms. In this way the ball is finally "downed" again and the teams line up as before for a scrimmage.

The game thus progresses in a series of downs, which are regulated by numerous rules, until a goal is secured or the period of play comes to an end. In a regulation match, the duration of actual play is seventy minutes, which is divided into two halves. The interval for rest between the halves is ten minutes. In practice and in match games a shorter period of play is often agreed upon, and the two "halves" are not always of equal length. Especially at the beginning of the season, before the players are thoroughly hardened, the first half is often limited to twenty-five minutes and the second half to twenty.

Play is resumed by a kick-off at the center of the field, as at first, the side losing the goal having possession of the ball, after a goal has

been scored, or the side which did not have the kick-off at the beginning of the first half takes it when the first half is begun. The side holding the ball, however, does not always retain possession; if one side is unable to advance it appreciably toward their opponents' goal it would be manifestly unfair to permit them to continue their attempts simply because they have the ball in their possession. If in three downs, or attempts to advance the ball, a team fails to progress five yards toward the opponents' goal, or to retreat twenty yards toward its own goal, the ball must be surrendered to the opposing team.

It is further provided by the rules, that a team may not retain possession of the ball by a second retreat of twenty yards toward its own goal unless in the meantime the ball has gone into the possession of the opposing team. It is seldom, however, that a team actually surrenders the ball on a third down, because, after two downs, if there seems little prospect of making the required five yards, it is usually considered best to resort to a kick. In this way the ball will probably go to the opponents, but will be much nearer their goal than if captured on a third down. If an emergency kick of this kind is made, it must be such as to give the opponents a fair chance to get the ball, and the ball must go beyond the line of scrimmage unless stopped by an opponent.

The rules of off-side play prohibit the players of the kicking side who are in advance of the ball when kicked, from touching it until it has been touched by an opponent, and thus the latter have a better chance of securing possession of it. One way in which advantage of any kick may be taken by the opponents, is by a fair catch. To make this, the player must catch the ball fairly before it touches the ground, or on the fly, and before any other player of his own side has touched it, and without attempting to run, must plant his heel in the ground at the spot where the catch was made.

A free catch gives the player the right of a free kick. In this the opponent may not come within ten yards of the mark made by heeling the catch, while he (and his side) may retire any distance he desires toward his own goal and then kick the ball in any way he may choose, either by a punt, a drop kick, or a place kick. The players of his own side must be behind the ball when kicked, and it must be sent at least ten yards unless stopped by an opponent.

Should the ball go across one of the side boundaries of the field, it is said to go "in touch" or out of bounds. It must then be brought back to the point at which it crossed the side line and put in play by one of the side which carried it across the line or first secured possession of it after it went out of bounds. There are two methods of putting the ball in play under these circumstances: The player may either touch it at right angles to the side line and then kick it, or, as is more often done, he may carry it into the field in any direction except toward the opponents' goal and put it down for an ordinary scrimmage. In the latter case the player, who is to carry the ball in, must, before starting, declare how many yards he will carry it, so that the opponent may know where it will be put in play. This distance must be at least five, and not more than fifteen yards.



When the ball has been advanced to a point within kicking distance of one of the goals, by a succession of plays, runs, kicks, downs, fair catches, etc., the captain of the attacking side must decide upon one of the two styles of play that are open to his side. That is, he must choose either to continue the running attempts to carry the ball across the goal line, or to try a drop kick for goal. In deciding this point there are several things to be considered, and it is here that the good qualities of the captain are tested. Should his side be successful in the attempt to carry the ball across the line for a touchdown, five points are scored, and, in addition, they are entitled to a try-at-goal, which, if made, counts one more point.

A drop kick, if made, counts only five points, and, when attempted, is by no means sure of being successful. But, on the other hand, if a drop kick is made on any first down within the twenty-five yard line, and fails to score, the ball is then put in play by a kick-off at the ten-yard line; that is, the attacking side may line up on that line, so that the defenders are forced to kick out from almost within their own goal. In choosing the style of play to be followed, the captain, in addition to the points mentioned, will consider the relative strength of the two teams as shown by the previous play, since it is from this that he must judge of the chances of making a touchdown.

Should he decide to continue the running attempts, and the ball eventually be carried across the goal line and downed, a touchdown is made at the point where the ball is finally held. Any player of the scoring side may then carry it out from that point at right angles to the goal line, and when he has reached a suitable distance, place it for a try-at-goal. When this is made, the opponents must stand behind their goal line. The ball is held by the placer close to, but not touching the ground, and its position is carefully regulated by direction of the kicker until satisfactory to him. It is then permitted to touch the ground and is at once kicked.

As soon as the ball touches the ground it is in play, and the opponents may charge forward and try to prevent the kick. For this reason the placer must not touch it to the ground until it is in a position to be kicked and the kick must be made at once. If the ball goes over the goal one point is scored, and the defenders carry it to the center of the field for a kick-off, as at the beginning of the game. This latter is also done if the goal be missed.

In considering the tactics most likely to be adopted by the attacking side when near the opponents' goal, we must not lose sight of the possibility that the latter may obtain possession of the ball on a third down, or in some other manner. In this case they would naturally endeavor by running or kicking to turn the tables on their adversaries, or, first of all, to free themselves from immediate danger. Sometimes, however, this is impossible, and the rules provide them with a means of release, which, though a sacrifice, is better than the loss of the goal. One of the defenders may at any time kick, pass, or carry the ball across his own goal line, and

if it is then touched down by one of his side a safety is scored. This counts two points for the opponents, but gives the defenders the privilege of carrying the ball out to the twenty-five yard line and there putting it in play by a drop kick, a place kick or a punt. A touchback is similar to a safety except that the impetus which sends it across the goal line must be given by the attacking side. The score for a touchback is two points.

From the foregoing it will be seen that the score of a game may consist of one or more of the following: Touchdown and goal, six points; touchdown from which no goal is kicked, five points; goal kicked from field, five points; touchback, two points; safety, two points for opponents of side making it.

A description of the various different styles of play and the duties of the players in each would require much more space than can be given to this subject here, but from the foregoing description of the principles of the game, coupled with careful study of the rules, a knowledge of Football may be obtained which will fit the beginner to engage in practice games. These, as has been said, especially when conducted under the direction of a competent coach, are absolutely essential to a thorough mastery of the sport.



## GLOSSARY OF TECHNICAL TERMS IN FOOTBALL

*Back*—The four players who ordinarily stand behind the rush line are known as backs. These are respectively designated as quarter-back, right half-back, left half-back, and full-back.

*Center or Snapper-back*—The central player of the rush line (which see), who puts the ball in play by "snapping" it back to one of the other players, usually the quarter-back.

*Dead*—See Rule XI.

*Down*—First, the ball is said to be *down* when the progress of the player holding it has been stopped or he has cried "down"; in either case the referee blows his whistle and the ball is temporarily dead. (Rule II, *a*.) Second, whenever the ball is "downed" as above, a *down* is said to have been played.

*Drop Kick*—See Rule II, *a*.

*Fair Catch*—See Rule VII, *a*.

*Free Kick*—See Rule II, *f*.

*Goal*—First, two upright posts, exceeding twenty feet in height, fixed firmly in the ground, eighteen feet six inches apart, with a horizontal crossbar ten feet from the ground. Second, when the ball is kicked in any way, except by a punt, from the field of play over the crossbar of the opponents' goal, a *goal* is scored. (Rule VIII.)



*Goal Line*—The end lines of the field of play, in which the goals are placed.

*Half*—One of the two parts into which the period of play is divided. In a regulation match, these are thirty-five minutes each, but their length may be changed by agreement of the captains of the contesting teams.

*Heeling a Catch*—A player in order to be credited with a fair catch must while making it, mark with his heel the spot at which the catch is made; this is called *heeling a catch*. (Rule VII, *a.*)

*Holding*—See Rule XVII.

*Kick-off*—See Rule II, *d.*

*Kick Out*—See Rule II, *e.*

*Linesman*—See Rule XXIX (III).

*Line Up*—When the players of a team take their positions ready for play, they are said to *line up*.

*Off-side*—Rule X.

*On-side*—Rule X, *c.*

*Pass*—When a player having possession of the ball voluntarily transfers it to another player of his own side, either by handing or throwing it to him, the former is said to *pass* it.

*Place Kick*—See Rule II, *b.*

*Punt*—See Rule II, *c.*

*Punt Out*—See Rule XXV, *b* and *c.*

*Referee*—See Rule XXIX (I).

*Rushers*—The center, two guards, two tackles and two ends are spoken of as *rushers*.

*Rush Line*—The seven rushers mentioned above compose the *rush line*.

*Safety*—See Rule IV, *e.*

*Scrimmage*—See Rule VI.

*Shin Guards*—A kind of protection worn over the shins, especially by men in the rush line.

*Snap Back*—To put the ball in play for a scrimmage by means of the hand or foot, with one quick and continuous motion from its position on the ground.

*Snapper-back*—See Center.

*Tackle*—First, the player who stands between the guard and the end on either side of the rush line. Second, to seize the player having the ball in the attempt to stop and hold him, so that the ball shall be down.

*Team*—The eleven players on either side constitute a full *team*.

*Touch*—The space outside the side boundaries of the field; if the ball goes across a side line, it is said to go into touch, or out of bounds.

*Touchback*—See Rule IV, *d.*

*Touchdown*—See Rule IV, *a*, *b*, and *c.*

*Try-at-goal*—See Rule XXV.

*Twenty-five-yard line*—Two lines drawn parallel to the goal line and twenty-five yards from them, respectively.

*Umpire*—See Rule XXIX (II).

## FOOTBALL RULES

## RULE I

(a) The game shall be played on a rectangular field, three hundred and thirty feet in length, and one hundred and sixty feet in width, inclosed by heavy white lines, marked with lime, or in some similar manner, upon the ground. The two end lines shall be termed goal lines. The side lines shall extend beyond their points of intersection with the goal lines.

(b) The goal shall be placed in the middle of each goal line, and shall consist of two upright posts extending more than twenty feet above the ground and placed eighteen and one-half feet apart, with a horizontal cross-bar ten feet from the ground.

(c) The game shall be played by two teams having eleven men each.

(d) The officials of the game shall be a referee, an umpire and a linesman. (Rule XXIX.)

(e) The football used in the game shall be an inflated rubber bladder inclosed in a leather cover. The ball shall have the shape of a prolate spheroid.

## RULE II

(a) A *drop kick* is made by letting the ball drop from the hands and kicking it the instant it bounds up from the ground.

(b) A *place kick* is made by kicking the ball after it has been placed on the ground.

(c) A *punt* is made by dropping the ball from the hands and kicking it before it touches the ground.

(d) A *kick-off* is a place kick from the center of the field of play, and cannot score a goal. (Rule VIII.)

(e) A *kick-out* is a drop kick, place kick or punt made by a player of a side which has made a touchback or a safety.

(f) A *free kick* is a term used to designate any kick made when the opponents are restrained by these rules from advancing beyond a certain point. It may be a *kick-off*, a *kick-out*, a *punt-out* (Rules V and XXV), or a *place kick for goal* after a touchdown.

## RULE III

(a) The ball is *out of bounds*, if it touches the ground on or outside the side lines, or the side lines extended, or if any part of a player who holds the ball touches the ground on or outside those lines.

(b) If the ball is kicked so that it goes out of bounds before crossing the opponents' goal line, it shall belong to the opponents. If, however, it strikes any player who is *on-side* and then goes out of bounds, it shall belong to the player who first obtains possession of it.

## RULE IV

(a) A *touchdown* is made when the ball in possession of a player is declared dead by the referee, and any part of it is on, over or behind the opponent's goal line.

(b) The point where the touchdown is marked is not where the ball is carried across the goal line, but where it is fairly held and called "down."



(c) If the ball is carried across the extension to the side line, it becomes dead at once, and the touchdown is marked at the intersection of the side line and the goal line.

(d) A *touchback* is made when a ball in possession of a player guarding his own goal is declared dead by the referee, and any part of it is on, over or behind the goal line, provided the impetus which sent it to or across the line was given by the opposing side.

(e) A *safety* is made when the ball, in possession of a player guarding his own goal, is declared dead by the referee, and any part of it is on, over or behind the goal line, provided the impetus which sent it from outside the goal to or across the line was given by the side defending the goal. Such impetus may come from any of the following: (1) A kick, pass, snap back or fumble; (2) A kick which bounded back from an opponent; (3) A player carrying the ball being forced back, provided the ball was not declared dead by the referee before the line was reached or crossed.

A safety is also made when a player of the side that has possession of the ball commits a foul which would give the ball to the opponents behind the offender's goal line.

#### RULE V

A *punt-out* is a punt made by a player of a side which has made a touchdown, to another player of his own side for a fair catch. (Rule VII.)

#### RULE VI

(a) A *scrimmage* occurs when the holder of the ball places it upon the ground and puts it in play by kicking it forward or snapping it back. The scrimmage does not end until the ball is again declared dead. *Snapping* the ball is sending it back after it is placed upon the ground, by means of one quick and continuous motion of the hand or foot.

The ball is put in play from a scrimmage in every case except those for which specific provision is made in these rules.

(b) If after the *snapper back* has taken his position, he should voluntarily move the ball as if to snap it, whether he withholds it altogether or only momentarily, the ball is in play and a scrimmage has begun.

(c) When snapping the ball back, the player so doing must be *on side*, the hand or foot used in snapping the ball excepted. (Rule X.)

#### RULE VII

(a) A *fair catch* consists in catching the ball, after it has been kicked by one of the opponents, before it touches the ground, or in catching in a similar way a punt-out by another of the catcher's own side, provided the player, while making the catch, makes a mark in the ground with his heel and does not take more than one step thereafter. It is not a fair catch if the ball, after being kicked, is touched by another player of the catcher's side before the catch.

(b) Opponents who are *off-side* shall not interfere in any way with a player attempting to make a fair catch, nor shall he be thrown to the ground after such catch is made, unless he has advanced beyond his mark.

(c) If a player makes a fair catch, one of his side must put the ball in play by a punt, drop kick or place kick, and the opponents must not come within ten yards of the line on which the fair catch was made. The ball must be kicked from some point directly behind the spot on which the fair catch was made and on a line parallel to the side lines.

## RULE VIII

A *goal* is made by kicking the ball in any way, except by a punt, from the field of play over the crossbar of the opponent's goal. (Rule II.) If the ball passes directly over one of the goal posts, a goal is scored. If after the ball has been kicked it strikes an opponent and then passes over the crossbar, it still counts as a goal.

## RULE IX

*Charging* is rushing forward to seize or block the ball, or to tackle a player.

## RULE X

(a) In a scrimmage, no part of any player shall be ahead of the ball when it is put in play. (See exception under (c) Rule VI.) The expression *ahead of the ball* means between the opponents' goal and a line parallel to the goal lines passing through the center of the ball.

(b) A player is put *off-side* if the ball, while in play, has last been touched by one of his own side behind him. No player when *off-side* shall touch the ball, except on a fumble or a muff, nor shall he interrupt or obstruct an opponent with his hands or arms until again *on-side*. No player, however, can be called *off-side* behind his own goal line.

(c) If a player is ahead of the ball when it is kicked by another of his side he is *off-side*, and he shall not allow the ball to touch him until he is again *on-side*. For infraction of this rule the ball shall go to the opponents on the spot.

(d) A player who is *off-side* is put *on-side* when the ball touches an opponent, or when one of his own side runs in front of him, either with the ball or having been the last to touch it when behind the *off-side* player.

(e) If the ball, when not in possession of either side, is touched when inside the opponents' ten-yard line by a player who is *off-side*, a touchback shall be scored for the defenders of the goal.

## RULE XI

(a) The ball is dead in the following cases:—

(1) Whenever either the referee or the umpire blows his whistle or declares a "down."

(2) When the referee has declared that a down, touchdown, touchback, safety or goal has been made.

(3) When a fair catch has been heeled.

(4) When it has been downed after going out of bounds.

(5) When it goes out of bounds after a kick before touching a player who is *on-side*.

(b) Should the ball strike an official it is not regarded as dead, but play continues exactly as though the ball had not touched him.

(c) No play can be made when the ball is dead, except to put it in play according to rule.

## RULE XII

(a) The length of the game shall be seventy minutes, divided into two halves of thirty-five minutes each, exclusive of time taken out. There shall be ten minutes intermission between the two halves.

(b) The game may be made of shorter duration by mutual agreement between the captains of the opposing teams.



(c) Whenever the commencement of the game is so late that, in the opinion of the referee, there is any likelihood of the game being interfered with by darkness, he shall, before play begins, arbitrarily shorten the two halves to such length as shall insure two equal halves being completed, and shall notify both captains of the exact time thus set. If either side refuses to abide by the opinion of the referee on this point it shall forfeit the game.

(d) The game shall be decided by the final score at the end of the two halves.

(e) Time shall not be called for the end of a half until the ball is dead, and in case of a touchdown, the try-at-goal shall be allowed.

(f) Time shall be taken out whenever the game is unnecessarily delayed and while the ball is being brought out for a try-at-goal, kick-out or kick-off, or when play is for any reason suspended by the referee or umpire. Time shall begin to be counted again when the ball is actually put in play.

(g) Time shall not be taken out when the ball goes out of bounds, except in case of unreasonable delay in returning the ball to play.

(h) No delay arising from any cause whatever shall continue longer than two minutes.

### RULE XIII

(a) The opposing captains shall "toss up" before the beginning of the game, and the winner of the toss shall have his choice of goal or kick-off. The ball shall be kicked off at the beginning of each half. Whenever a goal, following a touchdown, has been tried (Rules XXIV and XXV), or a goal from the field has been kicked (Rules VIII and XXVI), the side defending that goal shall kick off. The teams shall change goals at the beginning of the second half. The same side shall not kick off at the beginning of two successive halves.

(b) At kick-off, if the ball goes out of bounds before it is touched by an opponent, it shall be brought back and kicked off again. If it is kicked out of bounds a second time, it shall go as a kick-off to the opponents. If either side thus forfeits the ball twice, it shall go to the opponents who shall put it in play by a scrimmage at the center of the field.

(c) At kick-off, if the ball is kicked across the goal line and is there declared dead when in the possession of one of the side defending the goal, it is a touchback. If it is declared dead in a similar manner while in the possession of the attacking side, it is a touchdown.

(d) At kick-off and on a kick from a fair catch, the opposing side must stand at least ten yards in front of the ball until it is kicked. On a kick-out, the opposing side cannot stand nearer the goal than the twenty-five-yard line, except on a kick-out made after a drop kick on the first down inside the twenty-five yard line, when the ten-yard line is the restraining mark. (See exception, Rule XXVIII.)

### RULE XIV

(a) The side which has a free kick must be behind the ball when it is kicked. Otherwise the kick is subject to the penalties under Rule XXVIII, *e*.

(b) In case of a kick-off, kick-out, or kick from a fair catch, the ball must be kicked a distance of at least ten yards toward the opponents' goal from the line that restrains the player making the kick, unless it is stopped by an opponent. Otherwise the ball is not in play.

### RULE XV

(a) Charging is lawful, in case of a punt-out or kick-off, as soon as the ball is kicked, but the opponents must not charge until the ball is kicked.

(b) In case of any other free kick charging is lawful: (1) When the player of the side having the free kick advances beyond his restraining line or mark with the ball in his possession; (2) When he has allowed the ball to touch the ground by accident or otherwise.

(c) If such lawful charging takes place, and if the side having the free kick fails to kick the ball, then the opponents may line up five yards ahead of the line which restrained them before charging. In that case, the side having the free kick must kick the ball from some point directly behind its mark, if the free kick resulted from a fair catch, and in other cases from behind the new restraining line. The only exception to the foregoing is that in case of a try-at-goal after a touchdown, if the ball is not kicked after having been allowed to touch the ground once, no second attempt shall be permitted, and the ball shall be kicked off at the center of the field. (Rule 13.)

#### RULE XVI

(a) The snapper-back is entitled to full and undisturbed possession of the ball. The opponents must neither interfere with him nor touch the ball until it is actually put in play.

(b) In snapping the ball back, if the player so doing is off-side, the ball must be snapped again, and if this occurs once more on the same down, the ball shall go to the opponents.

(c) The man who snaps back and the man opposite him in the scrimmage cannot afterward touch the ball until it has touched some player other than one of these two.

(d) If the man who puts the ball in play in a scrimmage kicks it forward, no player of his side can touch it until it has gone ten yards into the opponents' territory, unless it be touched by an opponent.

(e) The man who first receives the ball when it is snapped back shall not carry it forward beyond the line of scrimmage, unless he has regained it after it has been passed to and has touched another player.

#### RULE XVII

(a) Before the ball is put in play, no player shall put his hands upon, or by the use of his hands or arms interfere with, an opponent in such a way as to delay putting the ball in play.

(b) After the ball is put in play, the player of the side that has possession of it may obstruct the opponents with the body only, except the player running with the ball, who may use his hands and arms.

(c) The players of the side not having the ball may use their hands and arms, but only to get their opponents out of the way in order to reach the ball or stop the player carrying it.

#### RULE XVIII

(a) Before the ball is put in play in a scrimmage, if any player of the side which has the ball takes more than one step in any direction, he must come to a full stop before the ball is put in play, except that one man of the side having the ball may be in motion toward his own goal without coming to a stop before the ball is put in play.

(b) When the ball is put in play by a scrimmage: (1) At least five players of the side having the ball must be on the line of scrimmage; (2) If five players, not including the quarter-back, are behind the line of scrimmage and inside the positions occupied by the players at the ends of said line, then two of these players must be



at least five yards back of the line, but all these players may be nearer than five yards to the line of scrimmage if two of them are outside the positions occupied by the players at the ends of said line. This means that they must have both feet outside the outside foot of the next player.

#### RULE XIX

A player may throw, pass or bat the ball in any direction except toward his opponents' goal.

#### RULE XX

(a) If a player having the ball is tackled, and the movement of the ball stopped, or if the player cries "Down!" the referee shall blow his whistle, and the side holding the ball shall put it down for a scrimmage.

(b) As soon as a runner attempting to go through is tackled and goes down, being held by an opponent, or whenever a runner with the ball in his possession cries "Down!" or if he goes out of bounds, the referee shall blow his whistle and the ball shall be considered down at that spot.

(c) There shall be no piling up on the player after the referee has declared the ball dead.

#### RULE XXI

(a) If, in three consecutive downs (unless the ball crosses the goal line), a team has neither advanced the ball five yards nor taken it back twenty yards, it shall go to the opponents on the spot of the fourth down. In these "consecutive downs" the ball must not have gone out of possession of the side holding it, except that by having kicked the ball they have given their opponents fair and equal chance of gaining possession of it. No kick, however, provided it is not stopped by an opponent, is regarded as giving the opponents fair and equal chance of possession unless the ball goes beyond the line of scrimmage.

(b) A team may not retain possession of the ball by taking it back twenty yards a second time, unless the ball in the meantime has been in the possession of the opponents.

(c) When a distance penalty is given, the ensuing down shall be counted the first down, except in the cases referred to in Sections A and K of Rule XXVIII, and last paragraph of Duties of the Umpire.

#### RULE XXII.

If the ball goes out of bounds whether it bounds back or not, a player of the side which secures it must bring it to the spot where the line was crossed, and there either (1) touch it in with both hands at right angles to the side line and then kick it; or, (2) walk out with it at right angles to the side line, any distance not less than five nor more than fifteen yards, and there put it down for a scrimmage, first declaring how far he intends to walk.

#### RULE XXIII

A side which has made a touchback or a safety must kick out from not more than twenty-five yards outside the kicker's goal. If the ball goes out of bounds before striking a player it must be kicked out again, and if this occurs twice in succession it shall be given to the opponents as out of bounds on the twenty-five yard line on the side where it went out. At kick out, the opponents must be on the twenty-five yard line or nearer their own goal, and the kicker's side must be behind the ball when it is kicked. Should a second touchback occur before four downs have been played, the side defending the goal

may have the choice of a down at the twenty-five yard line, or a kick out. The exception to this rule is that whenever a side has tried a drop-kick at the goal on a first down inside the twenty-five yard line and the result has been a touchback, the ten yard line, instead of the twenty-five yard line, shall determine the position of the opponents, and the kicker's side must be behind the ball when it is kicked.

#### RULE XXIV

(a) A side which has made a touchdown must try at goal, either by a place kick or a punt out.

(b) After the try-at-goal, whether the goal be made or missed, the ball shall go as a kick-off at the center of the field to the defenders of the goal.

#### RULE XXV

(a) If the try be by a place kick, a player of the side which has made the touchdown shall hold the ball for another of his side to kick, at some point outside the goal and on a line parallel to the side line passing through the point where the touchdown was declared. The opponents must remain behind their goal-line until the ball has been placed upon the ground.

(b) If the try-at-goal is to be preceded by a punt out, the punter shall kick the ball from the point at which the line parallel to the side line and passing through the spot where the touchdown was made, intersects the goal line. The players of each side must stand in the field of play not less than five yards from the goal line.

(c) The opponents may line up anywhere on the goal line except within the space of ten feet on each side of the punter's mark, but they cannot interfere with the punter. If a fair catch be made from a punt out, the catchers shall mark the position in the same way as for any fair catch, and the try-at-goal shall then be made by a place kick from this spot or any point directly behind it. If a fair catch be not made on the first attempt the ball shall go as a kick off at the center of the field to the defenders of the goal. At the time of the punt out the defending team is on-side and they may charge as soon as the ball is kicked and try to get it or to interfere with the catch.

(d) The holder of the ball in any place kick may be off side or out of bounds without rendering the kick invalid.

#### RULE XXVI

The following shall be the values of the plays in scoring: Goal obtained by touchdown, six points, which include five points for the touchdown and one point for the goal kicked; goal from field kick, five points; touchdown failing goal, five points; safety by opponents, two points.

#### RULE XXVII

(a) No one having projecting nails or iron plates on his shoes or wearing upon his person any metallic or hard substance that in the judgment of the umpire is liable to injure another player, shall be allowed to play in a match. No sticky or greasy substance shall be used on the persons of the players.

(b) A player may be substituted for another at any time at the discretion of the captain of his team.

(c) There shall be no unnecessary roughness, no throttling, hacking, or striking with the closed fist.

(d) A player who has been replaced by a substitute cannot return to further participation in the game.



(*e*) There shall be no unnecessary delay of the game by either team.

(*f*) There shall be no coaching, either by substitutes or by any other persons not participating in the game. In case of an accident to a player, but one official representative shall be allowed on the field of play.

(*g*) There shall be no tripping or tackling below the knees.

## PENALTIES

### RULE XXVIII

A foul is any violation of a rule.

The penalties for fouls shall be as follows:—

A. (1) For holding an opponent who has not the ball (Rule XVII); (2) for unlawful use of hands or arms (Rule XVII, *b* and *c*); (3) for violation of the rules governing off-side play (Rule X); (4) for violation of Rule XVI, *b*, *c*, *d* or *e*; (5) for tripping an opponent or tackling him below the knees,—the penalty shall be the loss of ten yards if the side offending is not in possession of the ball; or, if the offending side has the ball, the immediate surrender of it to the opponents. There is an exception to this rule in the case of an off-side play by the side in possession of the ball which shall be penalized not by the loss of the ball, but by the loss of ten yards, the number of the down and the point to which the ball must be advanced for the first down remaining unchanged. In case neither side was in possession of the ball when the foul was committed—for example, if the ball was in the air from a kick or was free upon the ground after a fumble, kick or pass—it shall go to the offended side.

The foregoing penalties shall be given from the spot where the foul was committed.

B. If the ball is thrown, passed or batted toward the opponent's goal (Rule XIX), it shall go to the offended side, who shall put it in play by a scrimmage at the spot where the foul was committed.

C. In the case of interference of any kind with putting the ball in play (Rules XVI, *a* and XVII, *a*) or unnecessary delay of the game (Rule XXVII, *e*), the offended side shall be advanced five yards.

D. (1) In case of piling up on a player after the referee has declared the ball dead (Rule XX, *c*), the offended side shall be given fifteen yards.

(2) If a player who is attempting to make a fair catch (Rule VII, *a*) is unlawfully obstructed, the offended side shall be given fifteen yards, and the choice of putting the ball in play by a free kick or by a scrimmage.

(3) If a player who has heeled a fair catch (Rule VII, *a*) is thrown to the ground, unless he has advanced beyond his mark, his side shall be given fifteen yards and be obliged to take a free kick.

E. (1) In any case of free kick (Rule II, *f*) if the kicker advances beyond his mark before kicking the ball (Rule VII, *a*, and XV, *b*), no matter whether he then kicks or not, the opponents shall be allowed to line up five yards nearer the kicker's mark, and the kick shall then be made from some point back of the first mark, and at the same distance from the side line.

This shall also apply when the side having a free kick allows the ball to touch the ground (Rule XV, *b*) and then fails to kick it (kick off and try-at-goal after touchdown excepted). The same ruling shall be given in case any player of the side making a free kick is ahead of the ball when it is kicked (Rule XIV, *a*).

(2) In the case of a free kick, if the opponents charge (Rule IX) before the ball is put in play (Rule XV, *a*), they shall be put back five yards for every such offense and the ball shall be put in play from the original mark.

F. In the case of unlawful starting before the ball has been put in play for a scrimmage (Rule XVIII, *a*), provided there is no infraction of Rule X, the ball shall be brought back and put in play again. If this occurs again in the same down, the ball shall be given to the opponents. If that side infringes the rule bearing upon this act again during the game, the ball shall immediately be given to the opponents.

The same ruling shall be made in case of infraction of Rule XVIII, *b* and *c*.

G. If either side refuses to play within two minutes after having been ordered to do so by the referee, it shall forfeit the game. This shall also apply to refusing to begin a game when ordered to do so by the referee. (Rule XII, *e*.)

H. Whenever the rules provide for a distance penalty, if the distance prescribed would carry the ball nearer to the goal line than the five-yard line, the ball shall be down on the five-yard line. If, however, the foul is committed inside the ten-yard line, half the distance to the goal shall be given.

I. If a team on the defense commits fouls when so near its own goal that these fouls are punishable only by the halving of the distance to the line (Rule XXVIII, *h*), the object being, in the opinion of the referee, to delay the game, the offending side shall be regarded as refusing to allow the game to proceed. The referee, in such cases, shall warn the offending side once, if the offense is repeated he shall declare the game forfeited to the opponents.

J. If a player is guilty of unnecessary roughness, throttling, hacking, or striking with closed fist (Rule XXVII, *c*), he shall at once be disqualified.

K. (1) In case the success of the play is clearly interfered with by some act palpably unsportsmanlike and not elsewhere provided for in these rules,—*e. g.*, by the throwing of any object by player or spectator with the result of interfering with the play,—the umpire shall have power to award ten yards to the offended side, the number of the down and the point to be gained for first down remaining unchanged.

(2) Whenever a foul is committed, which, in the opinion of the umpire, did not affect the play, the offended side may decline the penalty. In case of a run being made from this play, not more than fifteen yards from the spot where the foul was committed shall be allowed.

## DUTIES OF OFFICIALS

### RULE XXIX

#### I THE REFEREE

The Referee is responsible for the enforcement of Rules 1, 2, 3, 4, 5, 6 (*a* and *b*); 7 (except as relates to interference, throwing catchers, and positions of players); 8, 11, 12, 13 (except *d*); 14, *b*; 16 (*a* and *e*); 19, 20 (*a* and *b*); 21, 22, 23 (except as relates to positions of players); 24, 25 (except as relates to positions of players and interference); 26, 27 (*c*).

In making his decisions, the Referee must recognize and allow precedence to any penalty inflicted by the umpire for a foul.

The Referee's decisions are final upon all points not specified in the duties of the umpire.

The Referee shall see that the ball is properly put in play, and he is judge of its position and progress.



He is judge of forward passes, of interference with the snap-back, and of the advance of the ball by the player who first receives it from the snapper-back when the ball is out in play from a scrimmage (Rule 16, *a* and *e*).

At the beginning of a game, and in every case after time has been taken out, he shall ascertain from each captain that his team is ready, before ordering play to begin.

He is sole authority for the score of the game and is judge of forfeiture of the game under the rules.

The Referee may appeal to both the umpire and the linesman for testimony upon all points within his jurisdiction.

The Referee must volunteer testimony to the umpire concerning infringement of Rule 27, *f*.

## II THE UMPIRE

The Umpire is responsible for the enforcement of all rules whose infringement is punishable by a distance penalty or by the surrender of the ball by one team to the opponents, except 13, *b*; 16, *a* and *e*; 19 and 23. These are: Rules 6, *c*; 9, 10, 13, *d*; 14, *a*; 15, 16 (except *a* and *e*); 17, 18, 20, *c*; 27.

The Umpire is judge of the conduct of the players, and his decision is final regarding such fouls as are not specifically placed within the jurisdiction of the referee.

The Umpire is judge of charging, and of the positions of players whenever the ball is put in play.

He may appeal to both the referee and linesman for testimony in cases of fouls seen by them, and it shall be their duty to volunteer testimony concerning violations of Rule 27 (*c* and *f*). Captain and players, however, may not appeal to the referee or linesman for their testimony on the points just mentioned.

The Umpire shall not blow his whistle, nor declare the ball dead, nor call time, except to grant a penalty for a foul committed.

Whenever the Umpire notices, or is informed by the referee or linesman, that a substitute, or any other person not participating in the game, is coaching, he shall immediately exclude the offender for the remainder of the game from the neighborhood of the field of play, that is, send the offender behind the ropes or fence surrounding the field of play.

Furthermore, the Umpire shall inflict a penalty of loss of ten yards upon the side which is thus coached, the number of down and the point to be reached for, first down remaining the same. Only five men shall be allowed to walk up and down on each side of the field. The rest, including substitutes, water carriers and all who are admitted within the inclosure must be seated along the line of the inclosure.

The referee and Umpire should use whistles to indicate cessation of play on downs or fouls.

## III THE LINESMAN

The Linesman, under the supervision of the referee, shall mark the distances gained or lost in the progress of the play.

He shall remain on the side lines and be provided with two assistants, who shall remain outside the field of play, and who shall use a rope or chain in measuring distance. The best measuring device consists of two light poles about six feet in length, connected at the lower ends by a stout cord or chain exactly five yards in length. It is desirable to have the field marked off with white lines every five yards, parallel to the goal line, for measuring the five yards to be gained in three downs. It is also desirable that two stop watches be furnished the officials.

The Linesman, under the direction of the referee, shall also keep the time and he should use a stop watch in so doing.

The Linesman must give testimony when requested to do so by the referee or umpire (I and II) and must volunteer testimony concerning infringement of Rule 27, *c* and *f*.

The Linesman shall notify the captains of the time remaining for play, not more than ten, nor less than five minutes before the end of each half.

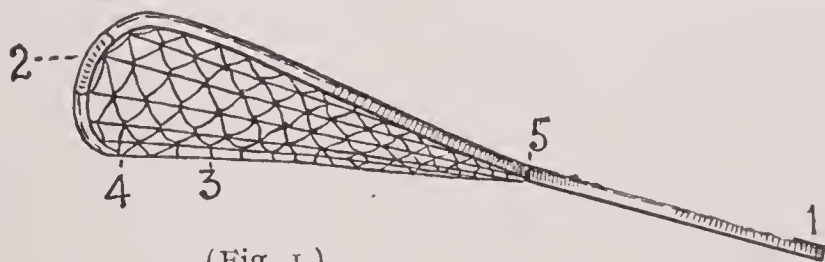
## LACROSSE

EARLY travelers among the Indians of this continent found the game of Lacrosse firmly established as what may be termed a national sport, and it was from the natives that the white population acquired a knowledge of it. If you have ever seen a game of Lacrosse played, you can readily understand the difficulty of learning it, and will not be surprised that this consideration has prevented the game from becoming universally popular. In Canada and the northern part of the United States, and in Ireland, it is played during the summer months, but in England only in winter, on account of the popularity of cricket and other summer games.

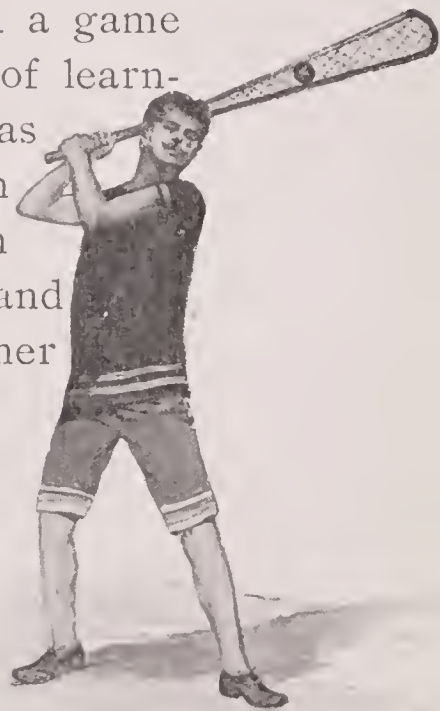
### THE GAME

The *crosse* (La Croix, the Bishop's crosier), from which the game derives its name, is formed of some tough, elastic wood, usually hickory, and no metal may be used in its construction. (Fig. I.) The *butt*, or handle (1), is round, and the other end of the *crosse* is flat and is bent into a curve about nine inches in diameter, which is called the *bend* (2). From the top of the bend to the butt is about four feet, three inches. A strong piece of gut (3), called the *leading string*, is stretched from the *tip*, or extremity (4), of the bend to a point called the *collar* (5), which is about eighteen inches from the butt. The space between the leading string and the back of the *crosse* is meshed with gut strings, which are arranged in much the same manner as those you have seen on tennis rackets. The latest style of *crosse* has a piece of gut, called the *crosse-string*, which passes from a point near the collar to the leading string, so as to prevent the ball from rolling off the *crosse* toward the butt.

The ball used is of India-rubber sponge, about eight inches in circumference and four and one-half ounces in weight. It is so constructed that there is little danger of a player being injured if struck by it.



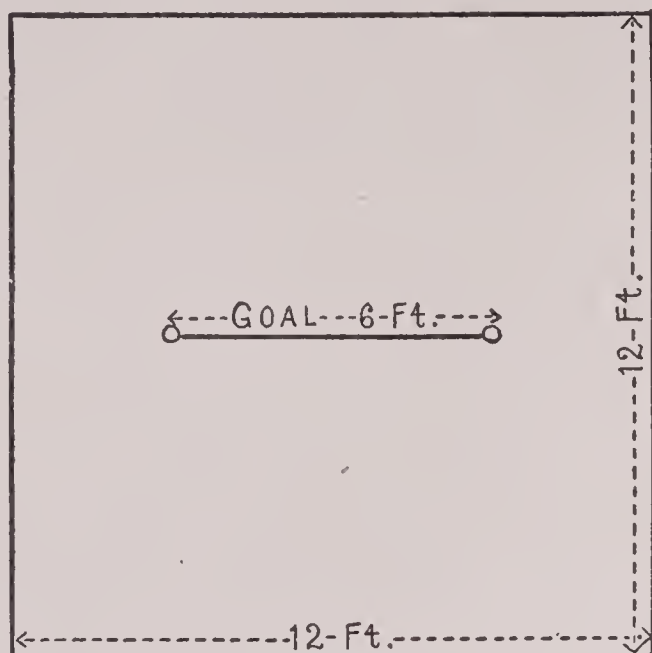
(Fig. I.)



There are two goals on the field, which are placed about one hundred and twenty-five yards apart, and in any position that is agreeable to the captains of the opposing teams.



These goals are posts six feet in height, usually surmounted by flags, and are secured in the ground six feet apart; they are also usually provided



(Fig. 2.)

with a crossbar that extends from the top of one post to that of the other.

Goal nets, which fill the space between the posts and the crossbar, are used to prevent the ball from passing beyond the goal when a score is made. Each goal stands in a *goal-crease* (Fig. II), which is a square space twelve feet on a side.

The object of each team is to pass the ball through its opponent's goal by means of the crosse, and to prevent the passage of the ball through its own goal. Except in the special cases referred to in the appended rules, a player is not al-

lowed to touch the ball with his hand. The game is played in two halves from thirty to forty-five minutes in length, with an interval of fifteen minutes for rest between them, and at its close the side that has scored the greater number of goals is the winner.

The boundaries of the field of play must be agreed upon by the captains of the opposing teams before the game begins, for they are not invariable for different matches. The captains agree upon two umpires, one of whom stands near either goal, and a referee, who follows the play and interprets the rules applying directly to it.

A full team is composed of twelve players, who are divided roughly into "attack" and "defense." At the beginning of the game they are distributed about the field between the goals in such a way as the experience of the captain may lead him to think advisable, the formation being subject to numerous variations. Each side has a goal-keeper stationed in its goal-crease, and no opponent may enter it unless the ball be there. Each player of one team "covers" one of his opponents, that is, he devotes his attention especially to him, and always keeps near enough to him to prevent his getting the ball, or throwing it if he does get it.

The two opposing "centers" take their positions in the exact center of the field, each facing the other's goal, and the ball is placed on the ground between them. They stoop down, and each places the back of his crosse against the side of the ball that is farthest from him.

At the signal to begin play, each center draws his crosse quickly and strongly toward him, and as the ball comes to one or the other he takes possession of it and plays it toward his opponent's goal. The other players of his side help him all they can, and those of the other side try to stop him and to get possession of the ball. If the man who has the ball is hard pressed, he passes it to one of his side who is "uncovered," that is, who has no opponent near enough to prevent his catching the ball. In this way it is advanced toward one or the other of the goals until the player having possession of it is near enough for a "pass," or try-at-goal.

It is the goal-keeper's duty, however, to prevent the ball from passing through the goal, and if he succeeds in stopping it, he throws it far down the field and the game is continued as before.

If an attempt at goal is successful, the ball is returned to the center of the field, and the play is begun again as at first. After each goal, the two teams exchange field positions in order to equally share any advantage due to location of goals.

To secure possession of a ball that is on the ground, the player runs toward it, and when it is reached he lowers the bend of his crosse in such a way as to pass it between the ground and the ball, thereby causing the latter to roll up on the netting. He must then control it in that position while running until he is ready for a throw. This is executed by a sweep of the crosse, which is modified according to the desired distance and direction. Correct throws are made along the back of the crosse, and the motion may be either underhand or overhand.

After a throw, the ball is caught on the crosse of one of the other players, or is picked up on it by him, and carried or thrown again. As the ball comes at all sorts of angles, and often at a high rate of speed, one may readily understand the difficulty of catching it.

Attack play should consist in quick dashes toward the opponent's goal, but a player should not carry the ball farther than is necessary to reach a favorable position for a try-at-goal. The most difficult ball for a goal-keeper to stop is one that comes swiftly and strikes the ground a few feet in front of him; sometimes, in fact, he cannot see the ball at all, but must estimate its position in order to stop it.

Opponents are allowed to strike with their crosses at a crosse on which the ball is being carried, with the object of dislodging it, and this is best avoided by the runner waving his crosse about, or "dodging," as it is called. A defense player sometimes stops his opponent, or prevents his throw, by what is known as "checking," in which the checker pays no attention to the runner's crosse, but simply places his body in the latter's way.

The length and weight of the crosse, and the powerful sweeps that are made with it, both in throwing and in preventing a throw, introduce an element of danger that is one of the great drawbacks of the game. This, together with the endurance required of a player, limits the playing of Lacrosse to those who are in the best of physical condition.

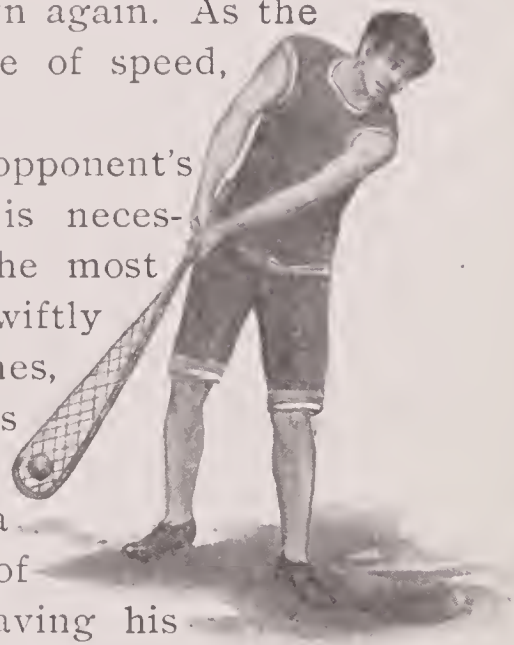
Following are the most important rules of the game as adopted by the United States Intercollegiate Lacrosse Association:—

## RULES OF LACROSSE

### RULE I

SECTION 1. Twelve players shall constitute a full team.

SEC. 2. If, however, one team is unavoidably short of men, the other team, if it sees fit, shall drop men until the numbers of the two teams are equal. But no match shall count in which the sides begin with less than nine men each.





SEC. 3. Should any player be compelled to leave the field during a match on account of illness or injury, the opposing team shall drop a player so as to equalize the sides.

SEC. 4. The players on each side shall be designated as follows:—

	GOAL-KEEPER.
Inside Home .....	Point.
Outside Home .....	Cover-point.
1st Attack .....	1st Defense.
2d Attack .....	2d Defense.
3d Attack .....	3d Defense.
Center .....	Center.
3d Defense .....	3d Attack.
2d Defense .....	2d Attack.
1st Defense .....	1st Attack.
Cover-point .....	Outside Home.
Point .....	Inside Home.
Goal-keeper.	

## RULE II

SECTION 1. The captain of each team must be one of the players. The captains shall toss for choice of goals, and shall report to the referee any infringement of the rules during the match.

## RULE III

SECTION 1. The goals must be one hundred and twenty-five yards from each other, and may be placed in any position agreeable to the captains of both teams. The tops of the flag poles, including any top ornaments, must be six feet above the ground and six feet apart. In matches they must be furnished by the home club.

SEC. 2. The crosse may be of any length to suit the player. It shall be woven with catgut, which must not be bagged. (Catgut is intended to mean rawhide, gut or clock string, not cord or soft leather.) The netting must be flat when the ball is not on it. In its widest part, the width of the crosse shall not exceed one foot. A string must be brought through a hole at the side of the tip at the turn, to prevent the point of the stick from catching the opponent's crosse. A leading string, resting upon the top of the stick, may be used, but must not be fastened so as to form a pocket lower down the stick than the ends of the lengthwise strings. A bumper, or stop, may be used, and may be fastened around the stick, but not passed through a hole in the stick, nor arranged in any way so as to form a pocket.

SEC. 3. No kind of metal, neither wire nor sheet, neither screws nor nails, shall be allowed on the crosse. Splices must be made either with string or gut.

SEC. 4. The ball to be used in all match games must be of sponge rubber, marked Regulation Lacrosse Ball, and manufactured by the New York Rubber Company. It shall weigh about five and three-quarters ounces. In each match a new ball must be used and it shall be furnished by the home team. It shall become the property of the winning team.

SEC. 5. No player shall be allowed to wear metal-stripped, metal-heeled, or spiked shoes, nor shall there be any projecting metal on the shoes, and any player attempting to evade this law shall immediately be ruled out of the match.

## RULE IV

SECTION 1. Before the match begins, the referee shall draw up the players in line and shall see that the regulations respecting the ball, crosses, and shoes are

complied with. Disputed points shall be left entirely to his decision. At any time during the match he shall have power to suspend, for not less than five, nor more than fifteen, minutes, any player who persists in violating these rules; the game shall go on after such suspension. He shall immediately call "Time!" when "foul" has been claimed by either captain or the player appointed by him, or when a goal has been taken. He shall also have power to call "time" when he observes a foul and to enforce the penalty of the foul.

SEC. 2. The jurisdiction of the referee shall not extend beyond the day for which he is appointed, and he shall not decide in any matter involving the continuance of a match, beyond the day on which it is played. The referee must be on the ground at the beginning of the match and during its continuance. At the beginning of each match, and after "fouls" or "ball out of bounds," he shall see that the ball is properly put in play, and shall call "Play!" when both sides are ready. He shall not express an opinion until he has taken the evidence on both sides; after doing this, his decision in all cases must be final. Any side rejecting his decision by refusing to continue the match, shall be declared to have forfeited the game.

SEC. 3. There must be one umpire at each goal. He shall stand behind the flags while the ball is in play. He shall decide whether or not the ball has fairly passed through the goal, and his decision shall be final. If a goal be taken, he shall raise his hand above his head and call "Goal!" The umpires must each be assigned to a goal before the captains toss for sides, such goals to be kept throughout the entire match. They must see that the rules respecting goals are adhered to, and shall be judges of all fouls committed within the goal-crease.

SEC. 4. In the settlement of any dispute, whether by umpires or the referee, it must be distinctly understood that the captains only have the right to speak on behalf of their respective teams; and any proposition or facts that any player may wish brought before the referee must come through the captain.

#### RULE V

SECTION 1. A goal shall be scored when, in the opinion of the umpire, the ball has been fairly passed between the posts, and below the level of their tops, by any other method than that of being carried through on the crosse of an attacking player. Should the ball be put through a goal accidentally by one of the players defending it, a goal is scored for the attacking side. Should it be put through a goal by any one not actually a player, it shall not count.

SEC. 2. In the event of a flag-pole being knocked down during a match, and the ball put through the space inclosed by the flag-poles when standing, a goal shall be scored for the attacking side; such cases are to be decided, as usual, by the umpire.

#### RULE VI

SECTION 1. The ball must not be touched with the hand, save in cases mentioned in Rules VII and VIII.

#### RULE VII

SECTION 1. The goal keeper, while defending his goal within the goal-crease, may knock the ball away with his hand, or block it in any manner with his crosse or body.

#### RULE VIII

SECTION 1. Should the ball lodge in a place inaccessible to the crosse, it may be taken out with the hand, and the player picking it up must *face* for it with his



nearest opponent ten feet inside playing limits. In case either uses a left-handed crosse, the referee shall toss up the ball between them and call "Play!" when both are ready.

#### RULE IX

SECTION 1. If the ball goes out of bounds, the referee shall call "Time!" The ball is then to be brought back to the place where it left bounds and faced by the two nearest opponents, ten yards within bounds, the other players retaining their positions from the moment when time was called. The captains must agree upon the bounds before the match begins.

#### RULE X

SECTION 1. Should the ball catch in the netting, the crosse must immediately be struck on the ground to dislodge it.

#### RULE XI

SECTION 1. A match shall consist of two forty-five minute halves, with an intermission of ten minutes between them, and the side scoring the greater number of goals shall be declared winner. Time is to be taken out whenever "time" is called. In the event of a tie, playing shall be continued, after an intermission of fifteen minutes, for one half-hour, and the side having scored the greater number of goals at the end of this time shall be declared winner. In the event of a tie at the end of this time, the captains shall decide whether the game shall be postponed, or whether play shall continue until a goal is scored, or whether the game shall remain a tie.

SEC. 2. At the beginning of each half, the ball shall be faced midway between the goals. The referee shall ascertain if both captains are ready, and place the ball on the ground between the crosses of the two center players. He shall then withdraw at least ten feet and call "Play!" The crosses must be placed back to back, and must overlap about two-thirds the length of the netting.

No other player shall be allowed within six feet of those facing the ball until it is in play.

SEC. 3. Whenever a goal is scored, the players must change goals, and the ball must again be put in play by facing it in the center of the field.

#### RULE XII

SECTION 1. Only the captain of either side, and one other player appointed by him, shall have the right to claim a foul, and the referee shall not stop the game when foul is claimed by any one else.

SEC. 2. When "foul" has been claimed, the referee shall call "Time" by blowing a whistle, after which the ball must not be touched by either side, nor shall the players move from the positions in which they happen to be at that moment, until the referee has called "Play." If a player should be in possession of the ball when "time" is called, he must drop it on the ground. If the ball enters a goal after "time" has been called, the play shall not be counted. If a goal is made after the play on which a foul is claimed, and before "time" is called, that goal shall count if the foul claimed is not allowed.

SEC. 3. In case of rain, either before or during the match, the game shall be postponed or delayed only by consent of both captains.

SEC. 4. If postponed, and resumed on the same day, there shall be no change of players on either side.

## RULE XIII

SECTION 1. When a foul is allowed by the referee, the player fouled shall be allowed a "free run" with the ball from the place where the foul occurred. For this purpose, all players within ten feet of said player shall move away to that distance, all others retaining their positions. But if a foul is allowed within twenty yards of a goal, the man fouled shall be entitled to a free run on moving away to that distance from the goal.

SEC. 2. If a foul is claimed and time called, and the foul then not allowed, the player accused of fouling shall be granted a "free run" under the conditions mentioned in Section 1.

## RULE XIV

Any violations following directions shall constitute fouls and be punished as such by the referee:—

SECTION 1. No player shall grasp an opponent's crosse with his hands, hold it with his arms, or between his legs; nor shall any player, when more than six feet from the ball, hold his opponent's crosse with his crosse in any way so as to keep him from the ball until another player reaches it.

SEC. 2. No player with his crosse, or otherwise, shall hold, purposely strike, or trip another, nor push with the hand, nor wrestle with the legs so as to throw an opponent.

SEC. 3. No player shall throw his crosse at a player or at the ball, under any circumstances.

SEC. 4. No player shall hold the ball in his crosse with his hand or person.

SEC. 5. No player shall charge into another after the latter has thrown the ball.

SEC. 6. The crosse, or square, check, which consists of one player charging another with both hands on the crosse so as to make it strike the body of his opponent, is strictly forbidden.

SEC. 7. No player shall interfere in any way with another who is in pursuit of an opponent in possession of the ball.

SEC. 8. "Shouldering" is allowed only when the players are within six feet of the ball, and then from the side only. Under no circumstances may a player run into or shoulder an opponent from behind.

SEC. 9. No attacking player shall be allowed within the goal-crease unless the ball is there.

SEC. 10. No player shall check the goal-keeper from behind the poles while the latter is in position.

## LAWN TENNIS

THE game of Lawn Tennis first became known in this country about a quarter of a century ago, and at the present time is perhaps the most familiar of our lawn games. Although numerous professional and amateur matches are played each year, Tennis is especially a home game, and its adaptability to home amusement has been the chief cause of its popularity. One need only to watch a close game to be convinced that Tennis is an athletic sport, and a player



soon finds that it calls for too much rather than for too little exercise, as beginners are likely to suppose. As an interesting and beneficial out-

door sport for women, Tennis enters into close

competition with golf. Both games offer a strong incentive to find healthful recreation in the open air. As to the comparative attractions of the two games, there are decided differences of opinion, but it is noticeable that each has done much to bring women into competition with men in the realm of athletics.

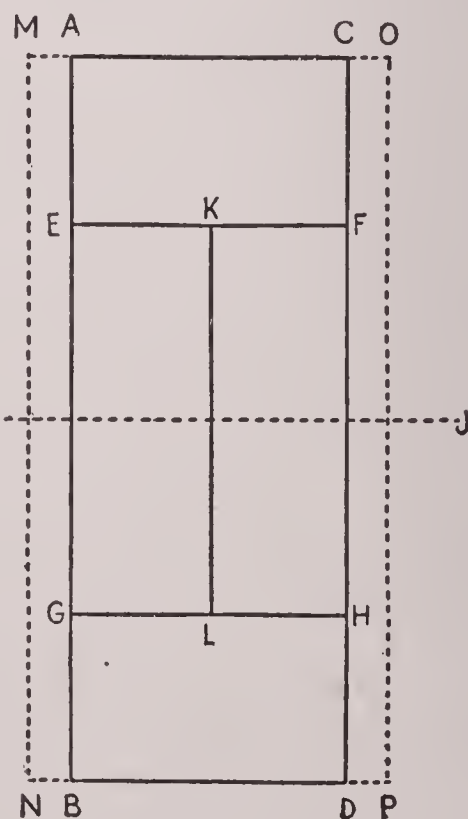
The prime requisites of a good Tennis player are agility, and quickness and accuracy of eye and hand. These qualities, with the possible exception of the first, are of inestimable value to us in our everyday lives, and whatever tends to develop them

should recommend itself to us as worthy of our favorable consideration.

### THE COURT, RACKETS, AND BALLS

THE surface of the field of play, or court, on which Tennis is played, may be macadam, clay, dirt, or grass, but the last is much the best. The hard surface of a macadam or clay court is very trying to the feet, and for other reasons is not desirable, especially for home play. Dirt courts are dusty in dry weather and dry slowly after a rain. They are to be preferred, however, to grass courts for club use, and in all places where the play is almost constant, since grass courts become irregular from being worn thin in spots by frequent use. The space selected should be about forty by ninety feet in dimensions, and the most important requirements are that it be level and smooth. The grass should be kept closely cut, and the surface, whether dirt or turf, should be made smooth and firm by frequent rolling.

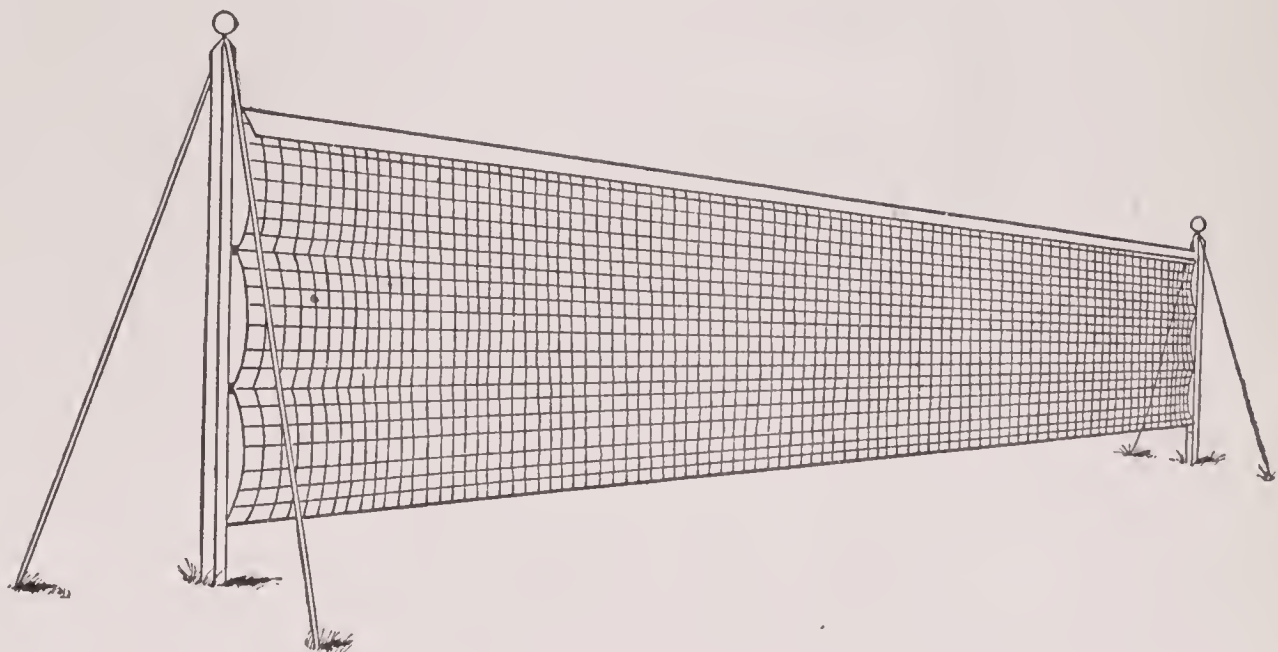
Having selected and prepared the ground, the lines of the court should next be marked out. The marking is usually done by tracing the lines with lime or whiting, which may be applied with a broom



(Fig. 5.)

or whitewash brush, or by means of some one of the numerous patent appliances that are made for that purpose. The lines should be about one and one-half inches wide, and should frequently be renewed so that they may always be distinct. Many of our modern

courts are marked with strips of tape, which are secured to the ground with pins and staples. In laying out the court (Fig. 5), care should be taken that there is no obstacle of any kind near the corners or the side or end lines. The *side lines*, AB and CD,



(Fig. 6.)

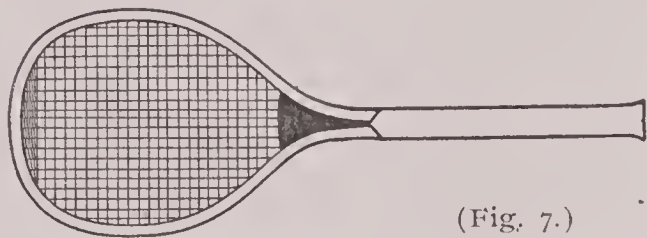
of the ordinary single court are parallel, and are seventy-eight feet long. The *end*, or *base*, *lines*, AC and BD, are parallel, and are twenty-seven feet long. Lines EF and GH, which are known as *service lines*, are distant eighteen feet from AC and BD respectively. Line KL, which is called the *middle*, or *half-court*, *line*, passes through the center of the field from line EF to line GH, and is parallel to the side lines. The double court is made by the addition of lines MN and OP, which are parallel to the side lines and are four and one-half feet from them. The base lines, AC and BD, must also be extended to meet MN and OP.

Line IJ passes through the center of the court, is parallel to the end lines and extends three feet outside of each of the side lines. A net pole is placed at each end of this line, and the net is stretched between the two poles. The poles are of wood or iron, and are four feet high. They are usually supported by guys, as in Figure 6, but they are sometimes fixed firmly in the ground without supports; a number of patent adjustable poles have been devised, which are held in place in various different ways. The net is made of twine, woven into meshes similar to those seen in ordinary fish nets. The openings are uniform in size, and the average diameter of each should not be greater than two inches. The net is required to extend from the ground to a height of three and one-half feet at the poles, and three feet at the middle. The latter height is usually maintained by means of a pronged pole or other device. A strip of white cotton, about three inches wide, running along the top of the net is intended to assist the player in distinguishing the top line of



the net. Stop nets of wire or other material are often placed a few feet outside the end lines of the court to stop passed balls.

The rackets used in Tennis are shaped as shown in Figure 7. Each is formed of a frame of wood in which strings of rawhide are



(Fig. 7.)

closely and tightly interwoven. The handle is also of wood, and is often covered with cork or other light, rough material, which forms a good grip.

The weight of ordinary rackets varies from thirteen and one-half to fifteen ounces, the lighter ones being used by women. In selecting a racket, it is well to choose a light one at first, for the exertion required to wield a fifteen-ounce racket for a considerable length of time, will tire the wrist of a person of ordinary strength and endurance to such an extent as to detract greatly from the accuracy of play. The best rule to follow in holding the racket is to grasp the handle at the point which seems most natural to the player.

Tennis balls are hollow spheres of rubber, two and one-half inches in diameter, and are covered with a special kind of flannel-like, white fabric. (Fig. 7½.) The regulation ball weighs two ounces.

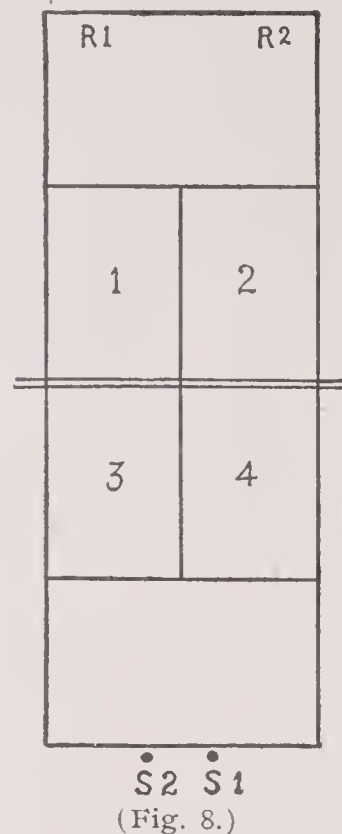
### THE GAME

In the single game of Lawn Tennis there are two players, who take their places one on either side of the net. The game is started by the "server," and his opponent is known as the "receiver," or "striker-out." The two players toss a coin to decide the choice of sides. The winner of the toss may select either the service or a side, but may not select both, and the choice of the other is left to his opponent. In delivering the first service, the server stands in position S. (Fig. 8) just outside the base line of the court, and a little to the right of the middle line. The receiver stands in position R. (Fig. 7½.)



The server tosses the ball into the air and strikes it with his racket in the attempt to drive it over the net and to cause it to strike in court 1, which is diagonally opposite his position. The receiver then tries to return the ball with his racket so that it will pass over the net and strike within the outside limits of the server's court. He must hit the ball on the first bound; if he fails to do so, or causes it to strike against the net, or sends it over the net outside the

server's court, the server scores one point. If the server fails to serve the ball so that it strikes in court 1, he makes a "fault," and two successive faults score one point for his antagonist. After the receiver returns the ball the first time, either player may hit it on the first bound, or may hit it while it is in the air and before it has touched the ground after leaving the racket of the other player. This latter is termed "volleying" the ball. If either player hits the ball in such a way as to send it into the net, or to cause it to strike outside his opponent's court, the opponent scores a point. This is also the case if a ball touches any part of a player or his clothing; if a player touches the net or its supports while the ball is in play; if he touches the ball with his racket more than once in a stroke; or if he strikes the ball while it is on his opponent's side of the net.



After the first point has been scored, the server takes the position S 2, and tries to serve the ball into court 2. The receiver then stands at R 2, and the game proceeds as before. The same player serves throughout the game and alternates between the positions S 1 and S 2 as points are scored.

The score is computed as follows: The first point won by a player counts 15; the second, 15 more, making 30; the third, 10, making 40; and the fourth wins the game, unless each player has 40 when the third point is made. The score is then said to be "deuce," and the player who next scores two successive points wins the game. A "love" score is a score of zero. The score of the server is always mentioned first. Thus, if the server has scored one point and the other player has not, the score is said to be "15, love." If the server has not scored and his opponent has scored one point, it is "love, 15." The terms "30, love" and "40, love" are used in a similar manner. The player who first wins six games wins the set, unless the players win five games each, when the set is won by the player who next wins two successive games. A set in which one of the players wins the first six consecutive games is called a "love set."

In serving the ball, the server makes use of the stroke which he believes to be most effective in obtaining two results, namely, accuracy and speed. His principal object is to obtain control of his service so that he may be able to place the ball in the receiving court of his opponent. His next is to serve the ball in the way that will make it most difficult for the receiver to return. The usual manner of serving is to take the ball in the left hand, toss it into the air just in front of, and in line with, the right shoulder, and to strike it with the



racket held in the right hand when it is at such a height that it can just be reached with the face of the racket. Some players, however, prefer to serve the ball from about the height of the shoulder, while others make use of the *underhand stroke*, in which the ball is struck when it is at a point below the elbow line of the server. It is well, in beginning, to pay more attention to accuracy of service than to speed, since only practice can decide how much speed a player can obtain without sacrificing accuracy.

In receiving a served ball, the receiver places himself in the best possible position for returning it effectively, as soon as he is able to determine approximately the part of his court in which it will strike. His object is not simply to return it into his opponent's court, but to place it where it will be most difficult for his opponent to return it to him. One method of returning the ball that is useful, especially if your opponent be near the net, is by "lobbing," which consists in striking the ball in such a way as to cause it to go into the air and over the opponent's head. Especial care is necessary in lobbing the ball to avoid sending it outside the court. "Smashing" consists in putting great force into the stroke and trusting to speed to prevent the opponent from returning the ball. This style of stroke is especially useful to a player who is standing close to the net. Volleying, as has been explained, is striking the ball before it touches the ground. This is not permissible in returning a served ball, but may be done at any other time during the game.

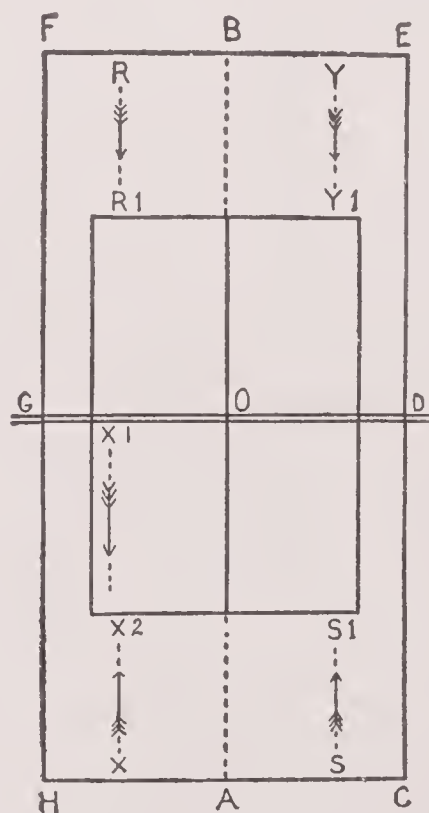
In striking a ball on the bound it is usual to strike it after it has reached the highest point in the bound and is descending again. A stroke made just after the ball leaves the ground and when it is on its upward course, is termed a "half volley." A "drive" is a long, fairly swift stroke which passes close to the top of the net. Any one of these strokes may be either "forehand" or "backhand," that is, may be made either with the front face of the racket toward the ball, or with its back face forward. Circumstances must determine which of these methods is to be used, though the forehand stroke will, of course, be used wherever practicable.

Expert Lawn Tennis players generally follow one of two different styles of play, which are known respectively as the "base-line" game, and the "net" or "volley" game. In the former, the player remains well back in his court, makes most of his returns with the ball on the bound, and seldom volleys. The principal advantages of the base-line game are that the ball is always in front of the player, and that ordinarily he has time to judge its position and direction before returning it. This is a slow, defensive style of play and requires greater endurance than the snappy, offensive net game. In the latter the

player keeps as close to the net as he consistently can, and tries to volley as many balls as possible. When a net player is opposed to one who prefers the base-line style of game, the former tries to return the ball at sharp angles away from his opponent, and to cause it to strike close to the net. This forces the base-line player to make repeated long, quick runs throughout the game, so that, besides fatiguing him, it forces him to attempt the most difficult returns. The net game is no doubt the more effective of the two, as it is also the more difficult to play. The beginner should first become proficient in base-line play, and then gradually modify his style of play so as to approach more closely to the net game.

In the double game of Tennis, there are two players on each side, and the court is enlarged by the addition of the lines shown dotted in Figure 5. The four players serve alternately.

Since there are two players on either side of the net, each must look after a specified portion of the court. The way in which this is allotted depends, of course, upon the judgment of the players, but the usual method is illustrated in Figure 9. The first player takes a position outside his base line, as at S, and, after serving, advances to S<sub>1</sub>, and covers that part of the court included between line AO and side line CD. His partner stands first either at X or at X<sub>1</sub>, and when the service is returned moves to X<sub>2</sub>, so as to be in position to cover the part of the court included between line AO and side line HG. The player of the opposite side, who is to receive the service, stands at R, returns the service and moves to R<sub>1</sub>. He covers space BOGF. His partner moves from Y to Y<sub>1</sub>, when the service is returned, and covers space BODE. Each player should be careful not to encroach upon his partner's playing space, as a collision is likely to result and a stroke thus be missed. Of course, the line separating the spaces to be covered by each of the players on a side is not fixed, but varies slightly, and when the players have become familiar with each other's style of play they are able to estimate at a glance whose territory the ball is in. The three-hand game is played in a double Tennis court, and is a modification of the double game.



(Fig. 9.)

Each player should be careful not to encroach upon his partner's playing space, as a collision is likely to result and a stroke thus be missed. Of course, the line separating the spaces to be covered by each of the players on a side is not fixed, but varies slightly, and when the players have become familiar with each other's style of play they are able to estimate at a glance whose territory the ball is in. The three-hand game is played in a double Tennis court, and is a modification of the double game.

In Tennis, as in other forms of athletic sport, it takes constant practice to become proficient. A beginner should strive to attain accuracy first and speed afterward. He should always play carefully and with judgment rather than attempt brilliant but erratic plays.



Following are some of the terms commonly used in tennis:—

### GLOSSARY

*Advantage*—The next stroke won by either player when the score is deuce (which see).

*Advantage-game*—The next game won after both sides have previously scored five games. (See Rule III, Sec. 21.)

*Back-hander, Back-hand Stroke*—A stroke in which the ball is hit with the reverse side of the racket.

*Ball*—(See Rule II.)

*Deuce*—The score when both players or sides have won three strokes. (The same as Forty-all.)

*Deuce-game*—The game, the winning of which makes the score in games equal, when each side has won more than five.

*Double*—A game in which there are two players on each side.

*Drop-stroke*—A stroke by which the ball is driven to the ground close to the net.

*Fanet*—(See Rule III, Sec. 6.)

*Fifteen*—The score for either player on winning his first stroke.

*Forty*—The score for either player on winning his third stroke. (See Deuce.)

*Forty-all*—(See Deuce.)

*Games-all*—If each player wins five games, the score becomes games-all. (See Rule III, Sec. 21.)

*Half-volley*—A stroke made at the moment the ball leaves the ground.

*Hang*—A method of service by which the ball comes up slowly or irregularly from the ground.

*Let*—(See Rule III, Sec. 19.)

*Lob*—A ball returned high in the air, usually to avoid a player near the net.

*Love*—Nothing scored.

*Love-set*—A set won in six consecutive games.

*Place*—To direct the ball to a desired part of the opponent's court.

*Poach*—To take a ball that should be taken by one's partner.

*Rally*—A series of strokes, beginning with the service and ending with a failure to return the ball.

*Rough Side of Racket*—The side of the racket from which the twisted gut projects.

*Serve*—To deliver the ball from the back line at the commencement of the game, and after the scoring of each point.

*Single*—A game in which there is only one player on each side.

*Smooth Side of Racket*—The side from which the twisted gut does not project.

*Sudden Death*—A term used when it has been agreed to decide the set by the best of eleven games, without playing deuce and vantage-games.

*Tennis-elbow*—An injury to the arm, attributed to excessive strain in overhand service.

*Thirty*—The score for a player on winning his second stroke.

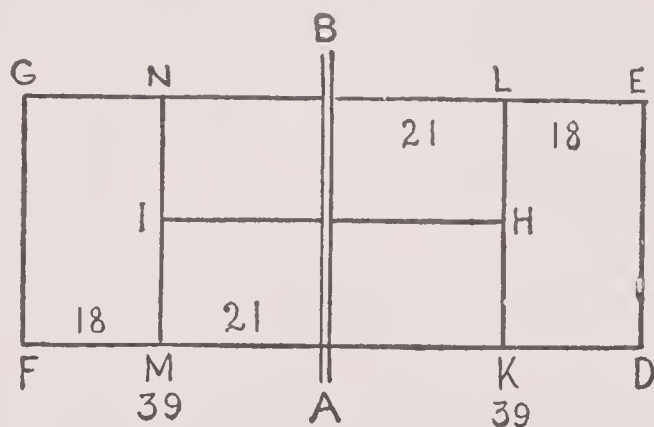
*Twist*—A movement imparted to the ball, causing it to swerve on rising from the ground.

*Volley*—A stroke by which the ball is returned before it reaches the ground.

Following are the rules of the game of Lawn Tennis, as adopted by the National Lawn Tennis Association of the United States:—

### RULE I.—THE COURT

The Court is seventy-eight feet long and twenty-seven feet wide. (Fig. 10.) It is divided into two equal parts by a net, the ends of which are attached to two posts, A and B, standing three feet outside the Court on either side. The height of the net is three feet six inches at the posts and three feet in the middle. At each end of the Court, parallel with the net and thirty-nine feet from it, are drawn the base lines, DE and FG, the ends of which are connected by the side lines, DF and EG. Half-way between the side lines, and parallel with them, is drawn the half-court line, IH, dividing the space on either side of the net into two equal parts, the right and left courts. On either side of the net, at a distance of twenty-one feet from and parallel with it, are drawn the service lines, KL and MN.



(Fig. 10.)

### RULE II.—THE BALL

The official ball shall measure not less than  $2\frac{1}{3}\frac{5}{8}$  inches, nor more than  $2\frac{1}{2}$  inches in diameter; and shall weigh not less than  $1\frac{1}{16}$  ounces, nor more than 2 ounces.

### RULE III.—THE GAME

SECTION I. The choice of sides, and the right to serve in the first game, shall be decided by toss; provided that if the winner of the toss choose the right to serve, the other player shall have choice of sides, and *vice versa*, or the winner of the toss may insist upon a choice by his opponent. If one player choose the court, the other may elect not to serve.

SEC. 2. The players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the *server* and the other the *striker-out*.

SEC. 3. At the end of the first game the striker-out shall become server, and the server shall become striker-out; and so on alternately in all the subsequent games of the set, or series of sets.

SEC. 4. The server shall stand with both feet behind the base line, that is, on the side of that line farthest from the net. It is not a fault if one of the server's feet does not touch the ground at the moment at which the service is delivered. He shall place both feet on the ground immediately before serving, and shall not take a running or walking start. He shall deliver the service from the right and left courts alternately, beginning from the right.

SEC. 5. A served ball must drop between the service line, half-court line, and the side line of the court which is diagonally opposite that from which it was served.



SEC. 6. It is a fault: (a) If the server fail to strike the ball; (b) if the ball served drop in the net, or beyond the service line, or out of court, or in the wrong court; (c) if the server do not stand as directed by Section 4.

SEC. 7. A fault cannot be taken.

SEC. 8. After a fault, the server shall serve again from the same court from which he served that fault, unless it was a fault because he served from the wrong court.

SEC. 9. A fault cannot be claimed after the next service is delivered.

SEC. 10. The server shall not serve till the striker-out is ready. If the latter attempt to return the service, he shall be deemed ready.

SEC. 11. A service or fault delivered when the strike-out is not ready, counts for nothing.

SEC. 12. The service shall not be volleyed, that is, taken before it has touched the ground.

SEC. 13. A ball is in play on leaving the server's racket, except as provided in Section 6.

SEC. 14. A return is allowed, even though it cause the ball to touch the net; but a service, otherwise good, which touches the net, shall count for nothing.

SEC. 15. The server wins a stroke: (a) If the striker-out volley the service, or if he fail to return the service or the ball in play; (b) if he return the service or the ball in play so that it drops outside his opponent's court; (c) if he otherwise lose a stroke, as provided by Section 8.

SEC. 16. The striker-out wins a stroke: (a) If the server serve two consecutive faults; (b) if he fail to return the ball in play; (c) if he return the ball in play so that it drops outside his opponent's court; (d) if he otherwise lose a stroke, as provided by Section 8.

SEC. 17. A ball falling on a line is regarded as falling in the court bounded by that line.

SEC. 18. Either player loses a stroke: (a) If the ball touch him, or anything that he wears or carries, except his racket in the act of striking; (b) if he touch the net or any of its supports while the ball is in play; (c) if he volley the ball before it has passed the net.

SEC. 19. In case a player is obstructed by any accident not within his control, the ball shall be considered a "let." But where a permanent fixture of the court is the cause of the accident, the point shall be counted. The benches and chairs placed around the court shall be considered permanent fixtures. If, however, a ball in play strike a permanent fixture of the court (other than the net or posts) before it touches the ground, the point is lost; if after it has touched the ground, the point shall be counted.

SEC. 20. On either player winning his first stroke, the score is called 15 for that player; on either player winning his second stroke, the score is called 30 for that player; on either player winning his third stroke, the score is called 40 for that player; and the fourth stroke won by either player wins the game for that player, except as provided below:—

If both players have won three strokes, the score is called *deuce*, and the next stroke won by either player is scored *advantage* for that player. If the same player win the next stroke, he wins the game; if he lose the next stroke, the score returns to *deuce*, and so on until one player wins the two strokes immediately following the score of *deuce*, when *game* is scored for that player.

SEC. 21. The player who first wins six games wins the set; except as provided below: If both players win five games, the score is called *games all*, and the next game won by either player is scored *advantage game* for that player. If the same player win the next game, he wins the set; if he lose the next game, the score returns to *games all*, and so on until either player wins the two games immediately following the score of *games all*, when he wins the set. But the committee having charge of any tournament may in their discretion modify this rule by the omission of *advantage sets*.

SEC. 22. The players shall change sides at the end of every set; but the umpire, on appeal from either player before the toss for choice, shall direct the players to change sides at the end of the first, third, fifth and every succeeding alternate game of each set; if the appeal be made after the toss for choice, the umpire may only direct the players to change sides at the end of the first, third, fifth and every succeeding alternate game of the odd, or deciding, set. If the players change courts in the alternate games throughout the match, as above, they shall play in the first game of each set after the first in the courts in which they respectively did not play in the first game of the set immediately preceding.

SEC. 23. When a series of sets is played, the player who served in the last game of one set shall be striker-out in the first game of the next.

SEC. 24. In all contests, the play shall be continuous from the first service till the match be concluded; provided, however, that between all sets after the second either player is entitled to a rest, which shall not exceed seven minutes; and provided, further, that in case of an unavoidable accident, a cessation of play which shall not exceed two minutes may be allowed between points; but this proviso shall be strictly construed, and the privilege shall never be granted for the purpose of allowing a player to recover his strength or wind. The umpire, in his discretion, may at any time postpone the match on account of darkness, or condition of the ground or weather. In any case of postponement, the previous score shall hold good. When the play has ceased for more than an hour, the player who, at the cessation thereof, was in the court first chosen, shall have the choice of courts, on the renewal of play. He shall stay in the court he chooses for the remainder of the set. The last two sentences of this rule do not apply when the players change every alternate game, as provided by Rule 24.

SEC. 25. If a player serve out of his turn, the umpire, as soon as the mistake is discovered, shall direct the player to serve who ought to have served. But all strokes scored before such discovery shall be counted. If a game shall have been completed before such discovery, then the service in the next alternate game shall be delivered by the player who did not serve out of his turn, and so in regular rotation.

SEC. 26. There shall be a referee for every tournament, whose name shall be stated in the circular announcing such tournament. He shall have general charge of the matches, under the instructions and advice of the Managing Committee, with such power and authority as may be given by these rules and by said committee. He shall notify the committee in case he intends to leave the grounds during the matches, and the committee shall appoint a substitute to act with like power during his absence. There shall be an umpire for each match, and as many linesmen as the players desire. The umpire may also act as linesman. The umpire shall have general charge of the match, and shall decide upon and call *lets*, and also decide whether the player took the ball on the first or second bound. The umpire shall also decide any question that may arise regarding the interpretation



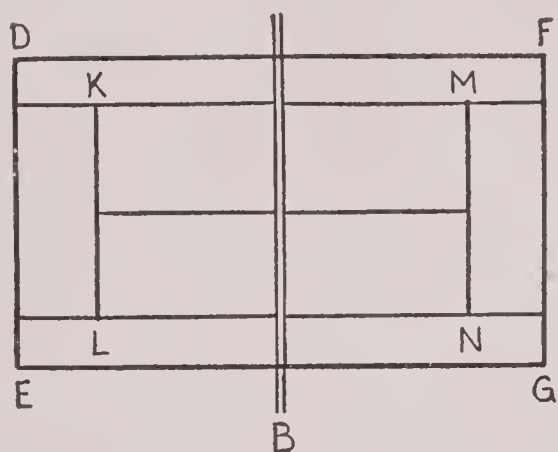
or construction of the rules. The decision of the umpire upon any question of fact, or where discretion is allowed him under these rules, shall be final. Any player, however, may protest against any interpretation or construction of the rules by the umpire, and may appeal to the referee. The decision of the referee upon such appeal shall be final.

The court shall be divided between the linesmen, and it shall be their only duty to decide, each for his share of the court, where the ball touched the ground, except, however, the linesmen for the base line, who shall also call foot faults. A linesman's decision shall be final. If a linesman is unable to give a decision, because he did not see, or is uncertain of the fact, the umpire shall decide, or direct the stroke to be played again.

SEC. 27. The above section shall apply to three-hand games, except as provided below:—

#### THREE-HAND AND FOUR-HAND GAMES

SEC. 28. For three-hand and four-hand games the court shall be thirty feet wide; four and one-half feet inside the side lines, and parallel with them, are



(Fig. 11.)

drawn the service side lines, KM and LN. (Fig. 11.) The service lines are not drawn beyond the point at which they meet the service side lines, as shown in the diagram.

SEC. 29. In three-hand games the single player shall serve in every alternate game.

SEC. 30. In four-hand games the pair who have the right to serve in the first game shall decide which partner shall do so; and the opposing pair shall decide in like manner for the second game. The partner of the player who served in the first game shall serve in the third, and the partner of the player who served in the second game shall serve in the fourth, and the same order shall be maintained in all the subsequent games of the set.

SEC. 31. At the beginning of the next set, either partner of the pair which struck out in the last game of the last set may serve, and the same privilege is given to their opponents in the second game of the new set.

SEC. 32. The players shall take the service alternately throughout the game; a player cannot receive a service delivered to his partner, and the order of service and striking out once established shall not be altered, nor shall the striker-out change courts to receive the service till the end of the set.

SEC. 33. It is a fault if the ball served do not drop between the service line, half-court line, and the side line of the court that is diagonally opposite that from which it was served.

SEC. 34. It is a fault if the ball served does not drop as provided in Section 33, or if it touch the server's partner or anything he wears or carries.

#### GIVEN ODDS

SEC. 35. *One-sixth of fifteen (1-6)* is one stroke given by the better to the poorer player in the second, eighth, fourteenth, and every subsequent sixth game in each set.

*Two-sixths of fifteen (2-6)* is one stroke given in the second, fourth, eighth, tenth, and corresponding games in each set.

*Three-sixths of fifteen (3-6 or one-half)* is one stroke given in the second, fourth, sixth, and every other alternate game in each set.

*Four-sixths of fifteen (4-6)* is one stroke given in the second, fourth, sixth, eighth, tenth, eleventh, twelfth, and corresponding games in each set.

*Fifteen (15)* is one stroke given in every game of each set.

*Fifteen and one-sixth (15.1)* is two strokes given in the same games as for *one-sixth*, and one stroke in each of the others.

*Fifteen and two-sixths (15.2)* is two strokes given in the same games as for *two-sixths*, and one stroke in each of the others.

*Fifteen and three-sixths (15.3 or half-thirty)* is two strokes given in the same games as for *three-sixths*, and one stroke in each of the others.

*Fifteen and four-sixths (15.4)* is two strokes given in the same games as for *four-sixths*, and one stroke in each of the others.

*Fifteen and five-sixths (15.5)* is two strokes given in the same games as for *five-sixths*, and one stroke in each of the others.

*Thirty (30)* is two strokes given in each game.

*Thirty and one-sixth (30.1)*, *thirty and two-sixths (30.2)*, *thirty and three-sixths (30.3 or half-forty)*, *thirty and four-sixths (30.4)*, *thirty and five-sixths (30.5)*, and *forty (40)* are three strokes and two given in the corresponding games of each set, as in the fifteen series.

#### OWED ODDS

SEC. 36. Owed (or minus) odds can also be used in exactly the same ways, the chief difference being that the better player is required to earn the owed strokes before he begins to score, while, in the case of given odds, the poorer player is given his handicap before play starts. These owed odds may be used either in conjunction with the given odds or separately. In order that the handicaps may occur as seldom as possible in the same games, when two players meet, one of whom owes odds and the other receives them, the games in which the owed strokes are paid differ from those in which the given strokes are taken. Following is the table for owed odds:—

*One-sixth (1-6)* is one stroke owed in the first, seventh, thirteenth, and every subsequent sixth game in each set.

*Two-sixths (2-6)* is one stroke owed in the first, third, seventh, ninth, and corresponding games in each set.

*Three-sixths (3-6 or one-half)* is one stroke owed in the first, third, fifth, and every other alternate game in each set.

*Four-sixths (4-6)* is one stroke owed in the first, third, fifth, sixth, and corresponding games in each set.

*Five-sixths (5-6)* is one stroke owed in the first, third, fourth, fifth, sixth, and corresponding games in each set.

*Fifteen (15)* is one stroke owed in each game.

*Fifteen and one-sixth (15.1)*, *fifteen and two-sixths (15.2)*, *fifteen and three-sixths (15.3 or half-thirty)*, *fifteen and four-sixths (15.4)*, *fifteen and five-sixths (15.5)*, *thirty (30)*, *thirty and one-sixth (30.1)*, *thirty and two-sixths (30.2)*, *thirty and three-sixths (30.3 or half-forty)*, *thirty and four-sixths (30.4)*, *thirty and five-sixths (30.5)* and *forty (40)* correspond to the fractions of fifteen, in the same way that the larger handicaps in the table for given odds correspond to the fractions of fifteen in that table.

The following explanation of special points in the rule will be found of value:—



## KNOTTY POINTS

## ADDENDA TO THE LAWS OF THE GAME

[Revised and approved by the Council of the Lawn Tennis Association.]

1. In no case may the striker-out volley the service, not even if the ball is clearly outside the service court.
2. A player who is struck by or strikes a ball in play (unless he thereby makes a good return) loses the stroke, no matter whether he is standing within the limits of the court or outside of them.
3. If the service is delivered before the striker-out is ready, and he tries to return it, but fails, he loses the stroke.
4. If the striker-out cries "Not ready!" after the service has been delivered, but before the ball touches the ground, he may not claim a fault because the ball ultimately drops outside the service court.
5. If the server, in attempting to serve, misses the ball altogether, it does not count as a fault, but if the ball is touched, no matter how slightly, by the racket, a service is thereby delivered and the rules governing the service apply at once.
6. If a ball, served or returned, drops into the proper court and screws or is blown back over the net, the player whose turn it is to strike may reach over the net and play the ball, provided that neither he nor any part of his clothes or racket touch the net. If he fails to play the ball, the stroke, of course, scores to his opponent, notwithstanding the fact that the ball has gone back over the net.
7. If a player throws his racket at the ball and so returns the ball into the proper court, he loses the stroke.
8. If a player catches a ball on his racket, walks with it to the net, and, reaching over, drops it into the court, he loses the stroke, as such proceeding cannot be regarded as an "act of striking."
9. If a player's racket passes over the net after he has returned the ball, he does not lose the stroke, providing the ball has passed over the net before being played, and has been returned properly.
10. If a player or his racket touches the posts or supports of the net or posts while the ball is in play, he loses the stroke.
11. If a player's racket slips out of his hand and touches the net while the ball is in play, he loses the stroke.
12. If a player, to avoid touching the net, jumps over it while the ball is in play, he loses the stroke.
13. If a ball is returned outside the posts, either above or below the level of the top of the net, and drops into court, it is a good return.
14. If a player succeeds in returning a ball served or in play which strikes a ball lying in the court, it is a good return.
15. If a spectator impedes, or in any way interferes with, a player, a "let" may be allowed under Section 19.
16. A "let" does not annul a previous fault.
17. The service always begins from the right-hand court, even though odds are given or owed, and the service always continues alternately from the right and left courts.
18. If an umpire erroneously calls "Fault!" and at once corrects himself and cries "Play!" and the striker-out fails to return the ball, a "let" must be allowed.
19. If the ball in play (other than a service) strikes any part of the net or its supports, or the center stay, no matter how low down (provided it does not touch the ground), and eventually goes over into the proper court, it is a good return.

20. If in a double game the service strikes either of the opponents, the server wins the stroke.

21. If a match is postponed on account of rain or darkness, or for any similar reason, and is continued on the subsequent day, the match shall be resumed from the point where it was discontinued on the previous day. An entirely new beginning may be made only with the consent of the referee.

22. If two players in a handicap play the wrong odds, the match stands, unless they have been wrongly instructed by the referee, or any person or persons acting under his instructions, in which case the loser may require that the match be replayed, unless the mistake in the odds has been in his favor. Such claim must be made within a reasonable time.

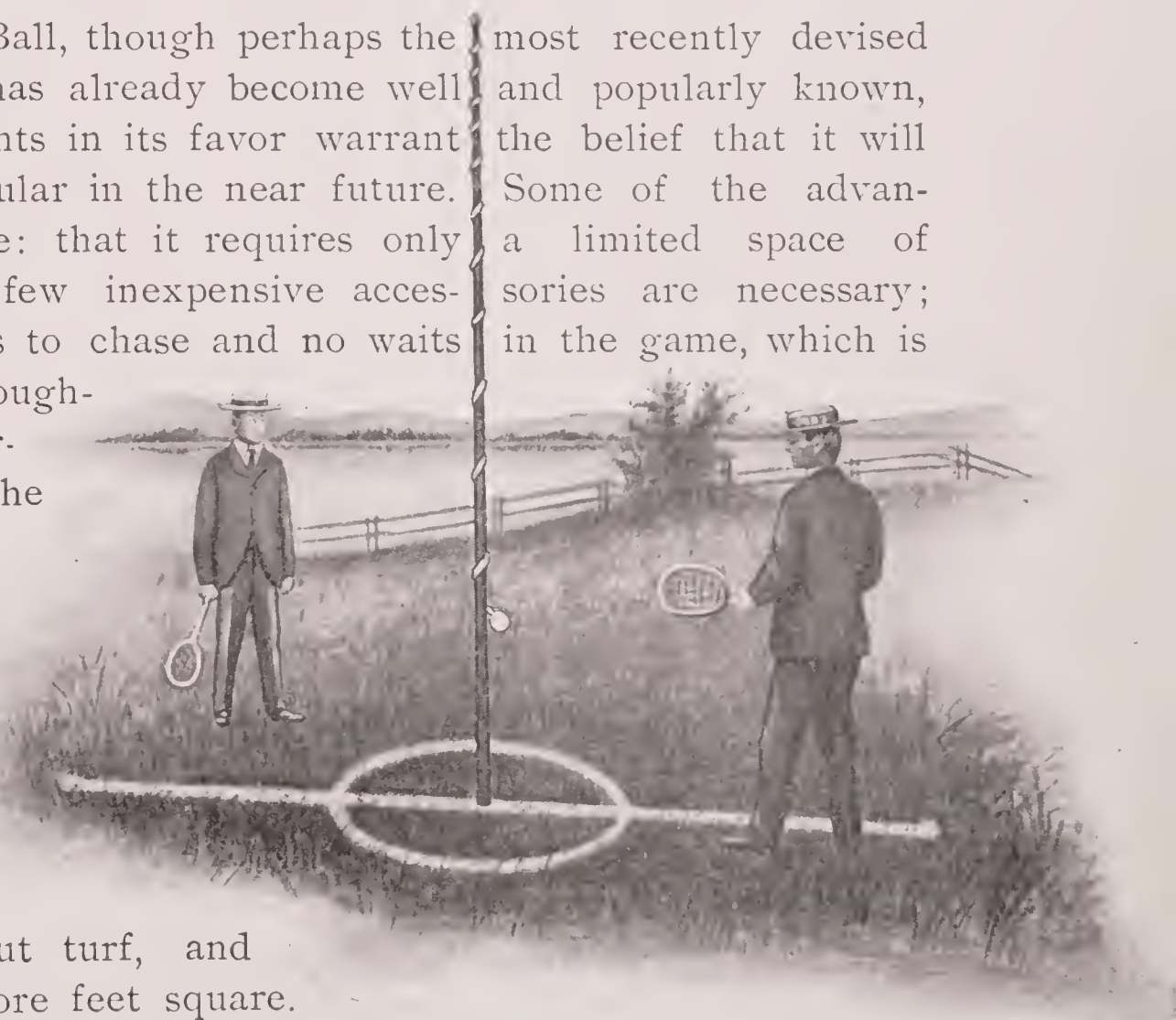
23. A similar decision must be given if two players neglect to play advantage sets when one of the conditions of the event in which they are competing is that advantage sets should be played.

## TETHER BALL

TETHER BALL, or Tether Tennis, as it is sometimes called, is one of the recent developments of lawn tennis. From the time of the old Roman games played with rackets, there has been a gradual increase of interest in this class of games, and a corresponding number of improvements have been made and innovations introduced. The game of Tether Ball, though perhaps the most recently devised of the racket games, has already become well and popularly known, and the numerous points in its favor warrant the belief that it will become still more popular in the near future. Some of the advantages of the game are: that it requires only a limited space of ground; that only a few inexpensive accessories are necessary; that there are no balls to chase and no waits in the game, which is fast and interesting throughout; and that the exercise is so light that the game may be played by either men or women without special training.

The court for Tether Ball should be a smooth, level piece of ground, either with or without turf, and must be twenty or more feet square.

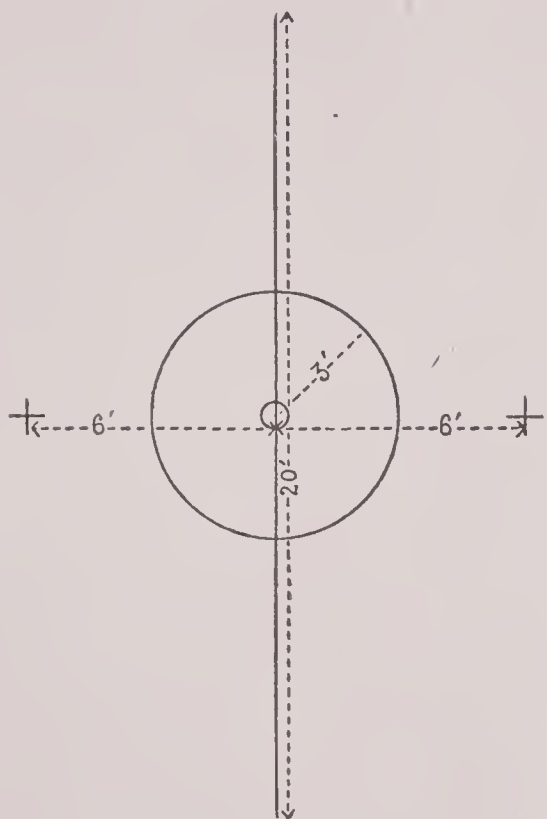
In the center of this space, a wooden pole is firmly secured in a vertical position, so as to extend ten feet above the surface of





the ground. A circle with a radius of three feet is plainly marked with lime, or in some other manner, around the base of the pole as a center, and this circle is bisected by a straight line, marked in a similar way, which extends ten feet on each side of the pole. The space outside the circle on one side of this line is one *court*, and that on the other side is the other *court*. Six feet on either side of the pole, and at right angles to the line of division, a small cross, called a *service cross*, is marked on the ground. At a point of six feet above the ground, the pole is encircled by a band of black paint two inches wide. An ordinary tennis ball with a linen cover is suspended by a string from the top of the pole, so as to hang two and one-half feet above the ground.

There are two players, and each is provided with an ordinary tennis racket. The game consists in one of the players endeavoring to



strike the ball with his racket so as to cause the string to wind around the pole above the painted band in one direction, while his opponent endeavors to cause it to do the same in the opposite direction. The player who succeeds in his attempt wins the game.

In beginning the game, the two players "toss" to decide the order of play. The one winning the "toss" states in which direction he will endeavor to wind the string on the pole; the loser serves first. To do this, he stands in his court at the point marked with the cross, and, after seeing that there are no turns of the string

around the pole, takes the ball in one hand, and strikes it with the racket, which is held in the other hand, so as to cause the string to wind around the pole in the desired direction. His opponent stands in the other court and strikes the ball with his racket, in the endeavor to cause the string to wind around the pole in the opposite direction, which was the one chosen by him as winner of the "toss." While the ball is in play neither player may touch it with his hand. Each must keep his body and his racket wholly within his own court, and must not step on or over the circle about the pole. The game, though offering plenty of opportunity for the display of skill and judgment, is not at all complicated, and from the foregoing brief description, aided by a study of the following rules, there will be no difficulty in understanding both how to superintend the construction of a court and how to play the game.

## RULES

## THE POLE

1. The pole shall be an upright wooden pole, extending ten feet above the ground. It must be in a vertical position and firmly embedded in the earth so as not to vibrate. The pole shall be seven and one-half inches in circumference at the ground and may taper toward its upper end. There shall be a black band two inches wide painted around it six feet above the ground.

## THE COURT

2. The court may be any smooth piece of ground, either with or without grass. It must be free from all obstructions. A circle with a radius of three feet shall be drawn on the ground about the pole. A straight line twenty feet long shall bisect the circle, dividing the court into two sections, as shown in the diagram. Six feet from the pole, at right angles to the line of division on each side of it, there shall be plainly marked two crosses. They are to be known as the "service crosses."

## THE BALL

3. The ball shall be a championship tennis ball, having a tight-fitting cover of linen cord. It shall be fastened to a string with a ring made of the same kind of cord. No metal shall be used on the ball. It shall be suspended from the top of the pole by a piece of heavy, braided fish line. The cord must allow the ball to hang seven and one-half feet below the top of the pole, so that when hanging at rest, it will be two and one-half feet from the ground.

## THE GAME

(1) The game shall be played by two opponents, who shall toss rackets for choice of court. The loser shall have service.

(2) The game shall be started by the service. This shall be taken from the center of each person's court at the point marked with a cross.

(3) The ball may be struck in any manner with the racket so as to send it in the direction agreed upon at the beginning of the game, the object being to wind the string upon the pole above the black line. The ball may be hit but once. It must then go into the opponent's court. A violation of this rule constitutes a foul.

(4) The winner of the toss shall determine in which direction he will endeavor to wind the ball. His opponent must then endeavor to prevent his winding the ball in that direction, and to wind it in the opposite direction.

(5) Each player must keep wholly within his own court. This includes his arm and his racket. He must not step on or over the circle about the pole. A violation of this rule constitutes a foul.

(6) If the string winds around the handle of the racket of one of the players, a foul is declared. In case the string winds about the pole below the black mark, a foul is counted against the person in whose favor the string is wound.

(7) Penalty for all fouls is a free hit by the opponent from the service cross.

(8) If, in taking the ball for service, it must be either wound or unwound on the pole a half turn in order to reach the other side, it shall be so wound or unwound.

(9) The game is won when the string has all been wound on the pole above the black line.

(10) The person winning the majority of eleven games wins the set.



## CRICKET

CRICKET may be said to occupy the same place in the heart of the English boy that baseball does in that of his American cousin, the difference being that Cricket means much more to the former than baseball does to the latter. The reason for this difference is readily understood when we consider that, while our American

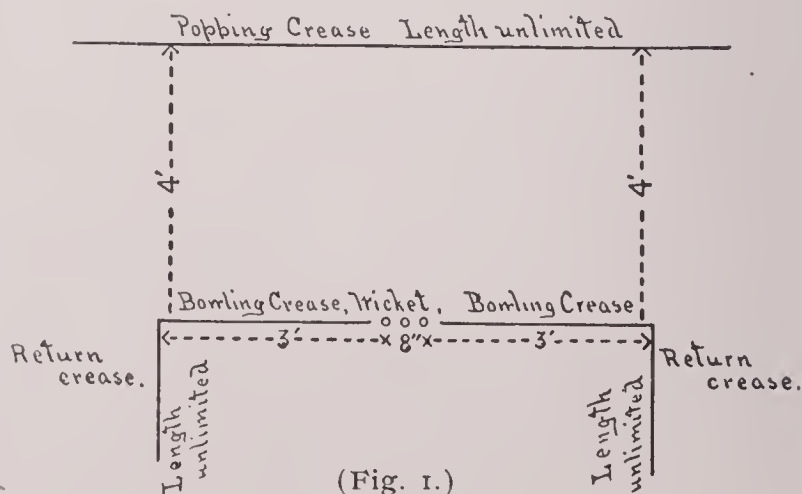


game has been in existence less than forty years, Cricket has been the English national sport for more than two centuries. In the schools and colleges of the two countries, however, these are respectively regarded as the national games, and the English boy who has made a good score, or has broken the defense of his opponents by skilful bowling in Cricket, is regarded in a heroic light by his fellows, just as is the American youth who has made a "home-run," or a clever "catch" at baseball.

Although a few Cricket elevens have been formed in this country, and intercollegiate matches have been played, the game has never attained the popularity here to which its rank as an amateur sport would seem to entitle it. It is more complicated than baseball. Both games use the ball and bat, and they have many other points of similarity.

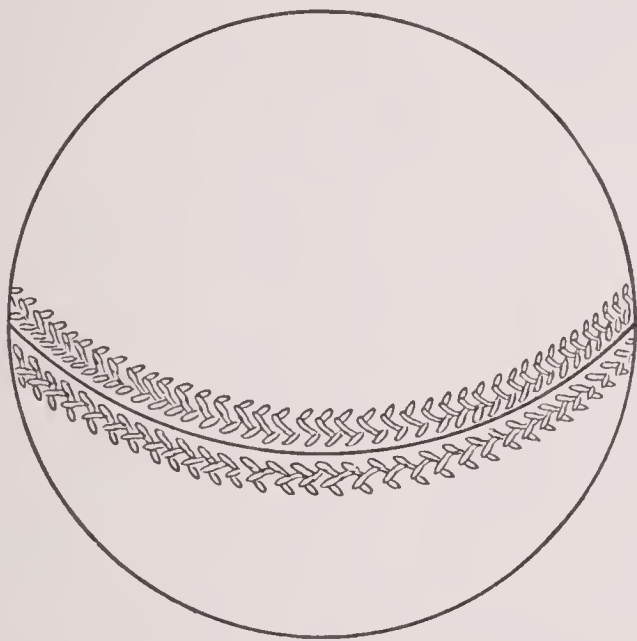
## THE FIELD; BALL AND BAT

The first requisite for a game of Cricket is a smooth, level field, as large as possible (from four to eight acres is the usual size), covered with a firm turf on which the grass is not coarse, and is kept carefully clipped. The two *wickets* are placed near the center of the field, twenty-two yards apart, opposite and parallel to each other. The space between them is called the "pitch," and corresponds to the space between the pitcher and the home base in baseball. Each wicket consists of three round, wooden sticks, called "stumps," which are driven into the ground in line, and have two bails on top. The stumps must be of



equal size, and must be placed just near enough together to prevent the ball from passing between them, their total width being eight inches, and their height twenty-seven inches above the ground. The bails are each four inches long, and, when placed in line on top of the stumps, must not project above them more than a half-inch. They should be lightly poised, so that a slight jar of the wicket will cause them to fall to the ground. A wicket is "down" when either of the bails is struck off, or, if both bails be off, when a stump is struck out of the ground.

The *bowling crease* (Fig. I.), which corresponds to the pitcher's box in baseball, extends three feet on either side of the wicket, and in the same line with it, and there is a *return crease* of unlimited length at each end of the bowling crease, extending behind the wicket, and at right angles to it. The *popping crease*, which corresponds to the front line of the batter's box in baseball, is of unlimited length, and is four feet in front of the wicket, and parallel to it.



(Fig. 2.)

and should be between nine and nine and one-fourth inches in circumference.

The *bat* most commonly used (Fig. III.) is made of willow, and has a spliced handle, which is usually of cane. The bat is nearly flat, and should be not more than four and one-fourth inches wide in the widest part, and not more than thirty-eight inches long. The best and most durable bats are those having a plain, straight grain. Before being used, they should be well seasoned and oiled. A beginner should be careful not to select too heavy a bat,—a good weight for a young player is about two and one-fourth pounds. The average batsman should use a bat weighing from three to three and one-fourth pounds.

Matches are played between two sides of eleven men each, unless otherwise agreed, and each side has one or more innings, according as the match lasts one or more days. Each side is under the charge of a captain, who manages the side and arranges the order of batting, and the positions the men are to occupy in the field. The captains should also agree as to

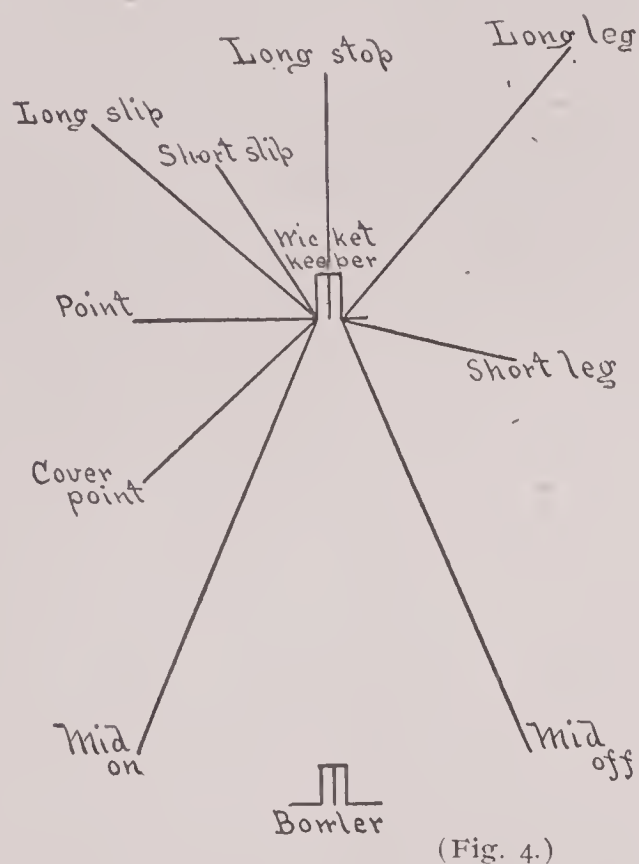


(Fig. 3.)



the length of the game and as to the application of any rules about which there is likely to be a difference of opinion. They must agree upon two umpires. During the game, each of the umpires takes a position near one of the wickets. If the field is limited in size, they should arrange before the game is begun to give a nominal value to such hits as send the ball out of bounds.

All the preliminaries having been arranged, the captains toss for the choice of innings, the winner usually preferring that his side shall

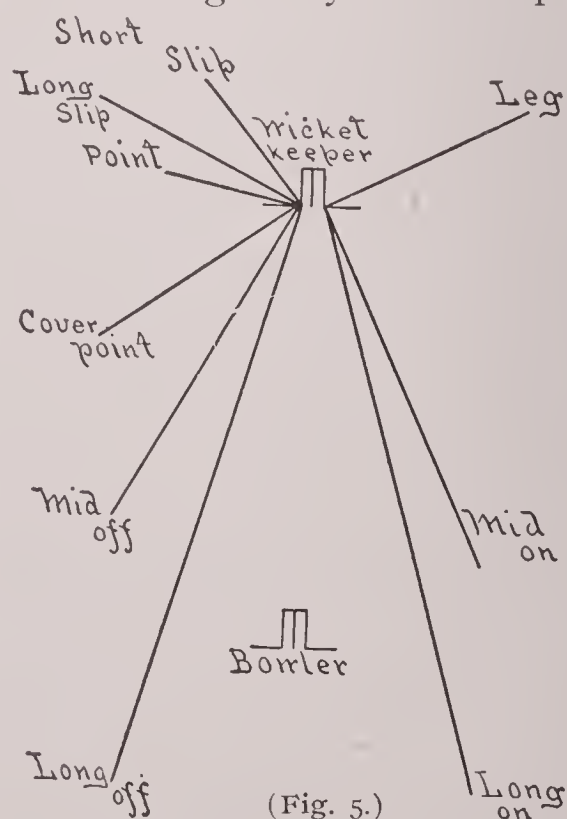


(Fig. 4.)

go first to bat. The umpires then go to their places, taking the ball and bails with them, and placing the latter in position on the stumps. The captain of the fielding side then stations a man at each wicket, one being the *bowler*, and the other the *wicket-keeper*, and the other men take their places in the field. As in baseball, the placing of the field depends entirely upon the captain's judgment, the desire being to have the men stationed where batted balls are most likely to go. Figures IV., V. and VI. give the usual positions for the fielders for the different kinds of bowling, but these vary

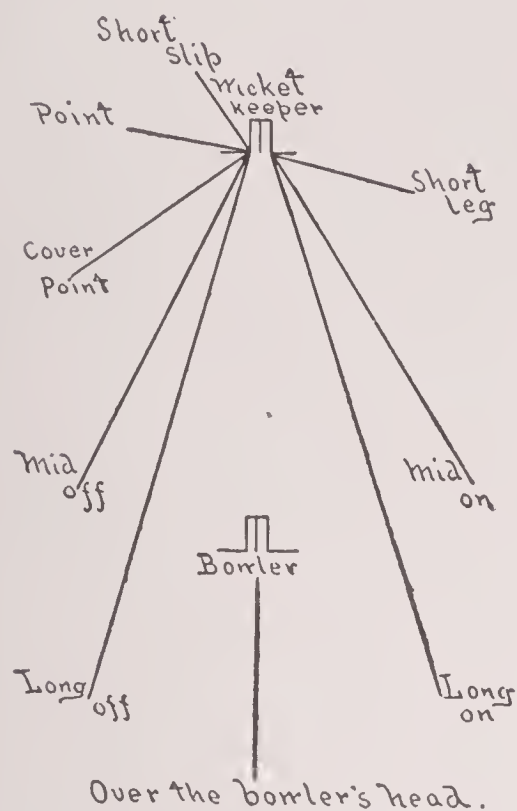
greatly in different games.

The two batsmen who are first in order as arranged by their captain, go to the wickets, after having settled between them which is to receive the first ball. The first batsman takes a position in front of the wicket at which the wicket-keeper is stationed, and between the bowling crease and the popping crease (Fig. I), and places himself where, in his judgment, he will be best able to interpose his bat between his wicket and a ball bowled from the other wicket. The unoccupied batsman stands between the bowling crease and the popping crease at the bowler's wicket, in such a position as not to interfere with the latter's movements, or to obstruct the view of the umpire at that end. The bowler must stand with one foot behind the bowling crease, and inside of the return crease. The wicket-keeper, who corresponds to the catcher in



(Fig. 5.)

baseball, stands directly behind his wicket, and when the ball is bowled, catches it and returns it to the bowler, just as is done by the catcher in baseball. The difference between *bowling* and *pitching* is that in the former the ball must not be thrown, and the arm must be straight as it leaves the shoulder.

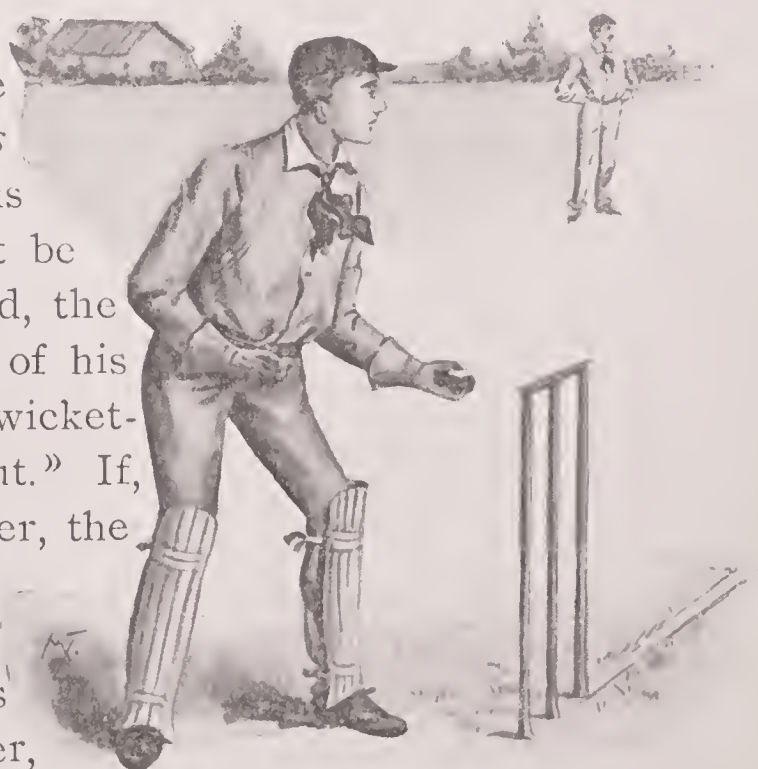


(Fig. 6.)

The umpire at the bowler's wicket looks to see if all is ready, then calls "Play!" and the game begins. The bowler's object is to hit the wicket, or to deliver the ball in such way that when hit by the batsman it will go into the air and be caught by a fielder; or to coax the batsman over the popping crease, when, if he miss the ball, the wicket is knocked down by the wicket-keeper, and the batsman is *stumped out*. The object of the batsman is to prevent the ball from striking the wicket, and to hit it so that it will go where it will

not be caught by a fielder, and a chance will thus be given to the batsman for a run. A run is scored if, after the batsman hits the ball, or at any other time while the ball is in play, both he and his partner run across from wicket to wicket, each getting inside the opposite popping crease without his wicket being struck down by a ball after touching any fieldman, or by the hand or arm of any fieldman having the ball in hand; if this process can be repeated, two runs are scored, and so on. It will thus be seen that if an odd number of runs is made, the batsmen will have changed wickets, and the second of them must receive the next ball.

If, in running, or at any other time while the ball is in play, the runner be *out of his ground*, and his wicket be struck down, he is "run out"; if a ball from a stroke of the bat be caught by a fielder before it touches the ground, the batsman is "caught out"; and if he be out of his ground, and the wicket be put down by the wicket-keeper with the ball in hand, he is "stumped out." If, in running, the batsmen have passed each other, the one who is running for the wicket that is put down is out; if they have not passed, the one who has left the wicket that is put down is out. As each batsman is put out he is replaced by another, and when ten have been put out the other side takes its inning. The eleventh batsman is entered on the scoring sheet as "not out."





When five balls have been delivered, the umpire at the bowler's wicket calls "Over!" A fresh bowler takes the ball and bowls from the other wicket, and the fieldsmen take new positions, which, however, bear the same relation to the position of the batsman as before.

With the addition of various minor rules, the whole game is a repetition of *overs*, such as have been described; the batsmen maintain their position as long as they can, the fielders change positions, and the bowlers alternate, whenever "Over!" is called; the original bowlers are replaced as the captain thinks advisable. The score is completed by adding together the runs made by each side during its inning.

Following are some of the most common terms used in Cricket, which should be learned in order to get a clear understanding of the game:—

#### GLOSSARY OF TECHNICAL TERMS

*Bye*—If a batsman misses a ball and it passes the fielders behind the wicket, the batsman may make a run, and it will be scored for his side as a *bye*, which counts one point.

*Leg Bye*—If a ball glances from any part of a batsman's body and passes the fielders, the batsman may take a run, and it will count one point for his side as a *leg bye*.

*Maiden Over*—A *maiden over* occurs when a bowler bowls five balls from which no runs are made.

*No Ball*—When a bowler delivers a ball from in front of the bowling crease, or jerks or throws the ball, the umpire calls "No ball!" When a *no ball* is bowled, the batsman can be put out only by "running out."

*Overs*—When a bowler has bowled five balls the umpire calls "Over!" and the ball is bowled by another bowler, from the opposite wicket. The object of *overs* is to rest the bowlers.

*Telegraph*—A *telegraph* is a small, wooden frame on which the score of the game is put after the fall of each wicket, by hanging up numbered pieces of tin or thin board. The top figures show the scores of the two sides; the middle figures show the number of men that are out; and the bottom figures show the score made by the last batsman put out.

*Wide*—A *wide*, or *wide ball*, is a ball that is so bowled as to be out of reach of the batsman. When a *wide* is bowled, the umpire calls "Wide ball!" and a single score is given to the batsman's side.

Following are the laws by which Cricket matches are usually played:—

#### RULES

##### THE GAME

1. A match is played between two sides of eleven players each, unless otherwise agreed; each side has two innings, which are taken alternately, except in the case provided for in Law 53. The choice of innings shall be decided by "tossing."

## RUNS

2. The score shall be reckoned by runs. A run is scored: (1) As often as the batsman after a hit, or at any time while the ball is in play, shall have crossed and made good the ground from end to end; (2) for penalties under Laws 16, 34, 41, and allowances under Law 44. Any run or runs so scored shall be duly recorded by scorers appointed for the purpose. The side which scores the greatest number of runs wins the match. No match is won unless played out or given up, except in the case provided for in Law 45.

## APPOINTMENT OF UMPIRES

3. Before the beginning of the match, two umpires shall be appointed, one for each end of the field.

## THE BALL

4. The ball shall weigh not less than five and one-half ounces, nor more than five and three-quarters ounces. It shall measure not less than nine inches, nor more than nine and one-quarter inches in circumference. At the beginning of each inning, either side may demand a new ball.



## THE BAT

5. The bat shall not exceed four and one-quarter inches width in the widest part; it shall not be more than thirty-eight inches long.

## THE WICKETS

6. The wickets shall be placed opposite and parallel to each other, at a distance of twenty-two yards apart. Each wicket shall be eight inches in width, and shall consist of three stumps, with two bails on top. The stumps shall be alike and of sufficient size to prevent the ball from passing between them; they shall extend twenty-seven inches above the ground. The bails shall each be four inches long, and when in position on top of the stumps, shall not project more than a half-inch above them. The wickets shall not be changed during a match, unless the ground between them becomes unfit for play, and then only by consent of both sides.

## THE BOWLING CREASE

7. The bowling crease shall be in line with the stumps and shall extend three feet four inches on either side of the center, with a return crease at each end at right angles behind the wicket.

## THE POPPING CREASE

8. The popping crease shall be marked four feet from the wicket, parallel to it, and shall be deemed unlimited in length.

## THE GROUND

9. The ground shall not be rolled, watered, covered, mown, or beaten during a match, except before the beginning of each inning and of each day's play, when, unless the in-side object, the ground shall be swept and rolled for not more than ten minutes. This shall not prevent the batsman from beating the ground with his bat, nor the batsman or bowler from using sawdust in order to obtain a proper foothold.



## THE BOWLER

## NO BALL

10. The ball must be bowled; if thrown or jerked, the umpire shall call "No ball!"

11. The bowler shall deliver the ball with one foot on the ground behind the bowling crease, and within the return crease; otherwise the umpire shall call "No ball!"

## WIDE BALL

12. If the bowler shall bowl the ball so high over, or so wide of, the wicket, that in the opinion of the umpire it is not within reach of the striker, the umpire shall call "Wide ball!"

## THE OVER

13. The ball shall be bowled in *overs* of five balls from each wicket alternately. When five balls have been bowled, and the ball is finally settled in the bowler's or wicket-keeper's hands, the umpire shall call "Over!" Neither a *no ball* nor a *wide ball* shall be reckoned as one of the "overs."

14. The bowler may change ends as many times as he thinks proper in the same inning, but he cannot bowl two overs in succession.

15. The bowler may require the batsman at the wicket from which he is bowling to stand on that side of it which he may direct.

## SCORING OF NO BALLS AND WIDES

16. The striker may hit a "no ball," and whatever runs result shall be added to his score, but he shall not be put out from a "no ball" unless he be *run out* or break Laws 26, 27, 29 or 30. All runs made from a "no ball," otherwise than from the bat, shall be scored "no balls," and if no run be made, one run shall be added to that score. From a "wide ball," as many runs as are made shall be added to the score as "wide balls," and if no run be otherwise obtained, one run shall be so added.

## BYE

17. If the ball has not been called "wide" or "no ball," and passes the striker without touching his bat or person, and any runs be obtained, the umpire shall call "bye"; but if the ball touch any part of the striker's person (hand excepted) and any runs be obtained, the umpire shall call "leg-bye," such runs to be scored "byes" and "leg-byes" respectively.

## PLAY

18. At the beginning of the match, and of each inning, the umpire at the bowler's wicket shall call "Play!"; from that time no trial ball shall be allowed to any bowler on the ground between the wickets, and when one of the batsmen is out, the use of the bat shall not be allowed to any person until the next batsman shall come in.

## DEFINITIONS

19. A batsman shall be held to be "out of his ground" unless his bat in hand or some part of his person be grounded within the line of the popping crease.

20. The wicket shall be held to be "down" when either of the bails is struck off, or, if both bails be off, when a stump is struck out of the ground.

## THE STRIKER IS OUT

21. Bowled out,—If the wicket be bowled down, even if the ball first touch the striker's bat or person.

22. Caught out,—If the ball, from a stroke of the bat or hand, but not the wrist, be held before it touch the ground, although it be hugged to the body of the catcher.

23. Stumped out,—If in striking at the ball, provided it be not touched by the bat or hand, the striker be out of his ground, and the wicket be put down by the wicket-keeper with the ball, or with hand or arm with ball in hand.

24. Leg before wicket,—If with any part of his person he stop the ball, which, in the opinion of the umpire at the bowler's wicket, shall have been pitched in a straight line from it to the striker's wicket and would have hit it.

25. Hit wicket,—If, in playing at the ball, he hit down his wicket with his bat, or any part of his person or dress.

26. Obstructing the field,—If, under pretense of running, or otherwise, either of the batsmen wilfully prevent a ball from being caught.

27. Hit the ball twice,—If the ball be struck, or be stopped by any part of his person, and he wilfully strike it again, except it be done for the purpose of guarding his wicket, which he may do with his bat or any part of his person, except his hands.

#### EITHER BATSMAN IS OUT

28. Run out,—If in running, or at any other time while the ball is in play, he be out of his ground, and his wicket be struck down by the ball after touching any fieldsman, or by the hand or arm of any fieldsman with ball in hand.

29. Handled the ball,—If he touch with his hands, or take up the ball while in play, unless at the request of the opposite side.

30. Obstructing the field,—If he wilfully obstruct any fieldsman.

31. If the batsmen have crossed each other, he that runs for the wicket which is put down is out; if they have not crossed, he that has left the wicket which is put down is out.

32. If the striker is caught, no run shall be scored. If the batsman is run out, that run which was being attempted shall not be scored.

33. When a batsman is out, from any cause, the ball shall be "dead."

#### LOST BALL

34. If a ball in play cannot be found or recovered, any fieldsman may call "Lost ball!" when the ball shall be "dead"; six runs shall then be added to the score; but if more than six runs have been run before "Lost ball" has been called, as many runs as have been made shall be scored.

35. After the ball shall have been finally settled in the wicket-keeper's or bowler's hand, it shall be "dead"; but when the bowler is about to deliver the ball, if the batsman at his wicket be out of his ground before actual delivery, the said bowler may run him out; but if the bowler throw at the wicket and any runs result, "no ball" shall be scored.

36. A batsman shall not retire from his wicket and return to it to complete his inning, after another has been in, without the consent of the opposite side.

#### SUBSTITUTE

37. A substitute shall be allowed to field or run between wickets for any player who may, during the match, be incapacitated by illness or injury, but for no other reason, except with the consent of the opposite side.

38. In all cases where a substitute shall be allowed, the consent of the opposite side shall be obtained as to the person who is to act as substitute, and the place in the field which he shall take.



39. In case any substitute shall be allowed to run between wickets, the striker may be run out if either he or his substitute be out of ground. If the striker be out of his ground while the ball is in play, that wicket which he has left may be put down and the striker put out, although the other batsman may have made good the ground at that end, and the striker and his substitute at the other end.

40. A batsman is liable to be put out for any infringement of these laws by his substitute.

#### THE FIELDSMAN

41. A fieldsman may stop the ball with any part of his person, but if he wilfully stop it otherwise the ball shall be "dead," and five runs shall be added to the score of the in-side, whatever runs may have been made.

#### WICKET-KEEPER

42. The wicket-keeper shall stand behind the wicket. If he take the ball for the purpose of stumping before it has passed the wicket, or if he interfere with the striker by any noise or motion, or if any part of his person be over or before the wicket, the striker shall not be out, except under Laws 26, 27, 28, 29 and 30.

#### DUTIES OF UMPIRES

43. The umpires are the sole judges of fair or unfair play, of the fitness of the ground, the weather and the light for play; all disputes shall be determined by them, and if they disagree, the existing state of things shall continue.

44. They shall place fair wickets, arrange boundaries where necessary, and the allowance to be made for them, and shall change ends after each side has had one inning.

45. They shall allow two minutes for each striker to come in, and ten minutes between each inning. When they call "Play!" the side refusing to play shall lose the match.

46. They shall not order a batsman out unless appealed to by the other side.

47. The umpire at the bowler's wicket shall be appealed to before the other umpire in all cases, except in those of stumping, hit wicket, run out at the striker's wicket, or those arising out of Law 42; but in any case in which an umpire is unable to give a decision, he shall appeal to the other umpire, whose decision shall be final.

48. If the umpire at the bowler's end be not satisfied of the absolute fairness of the delivery of any ball, he shall call "No ball!"

49. The umpire shall take special care to call "No ball!" instantly upon delivery, or "Wide ball!" as soon as it passes the striker.

50. If either batsman make a short run, the umpire shall call "One short," and the run shall not be scored.

51. No umpire shall be allowed to bet.

52. No umpire shall be changed during a match, unless with the consent of both sides, except in case of violation of Law 51; then either side may dismiss him.

53. On the last day of a double-inning match, or in a one-day match, the batting side may, at any time, declare their inning, and may put the other side in, with a view to completing the game.

54. The side which goes in second shall follow their innings if they have scored eighty runs less than the opposite side.

#### ONE-DAY MATCHES

1. The side which goes in second shall follow their innings if they have scored sixty runs less than the opposite side.

2. The match, when not played out, shall be decided by the first inning.
3. Before the beginning of a match, it may be agreed that the "over" shall consist of five or of six balls.

#### GROUND RULES

Before the game is begun, it should be understood by the captains what the ground rules are, and they shall agree on them, also on the time of drawing the stumps; they shall inform the umpires when this has been done.

## CROQUET

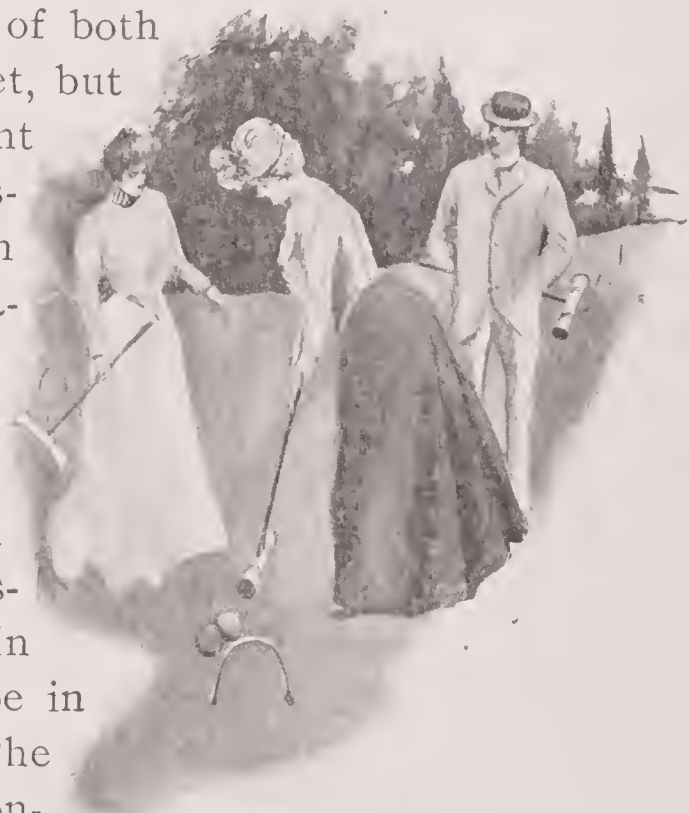
CROQUET, though one of the oldest of the outdoor games, has vacillated so much between public favor and disfavor that it would not be strictly true to call it "popular." Though a subject of ridicule during the greater part of the last twenty-five years, a revival of interest in the game has recently been experienced, so that at the present time there are many people of both sexes who confess that they not only play Croquet, but enjoy it. There are few games in which judgment and strategy play a larger part, and both as a pleasurable recreation for the lawn player and as an exciting sport for the expert, it merits the admiration of its devotees.

#### GROUND, MALLET, BALL, HOOPS

The first necessity for the game is a stretch of suitable turf or bare ground, which, when possible, should be about thirty by forty yards in extent. Inequalities of surface or a steady slope in one direction should be avoided or corrected. The accessories of the game are very simple, and consist of two round stakes, usually of wood, one inch in diameter and twenty-four inches in height, iron hoops, varying in number from six to ten, according to the *setting* adopted, and a mallet and a ball for each player.

The ordinary mallet consists of a handle or shaft of ash about thirty-three inches in length, fitted into a cylindrical head, usually of boxwood, the length of which is eight or nine inches, and diameter about three inches. There are many modifications of this style of mallet, both as to size and as to the material used in its construction, but the shape is approximately the same in all.

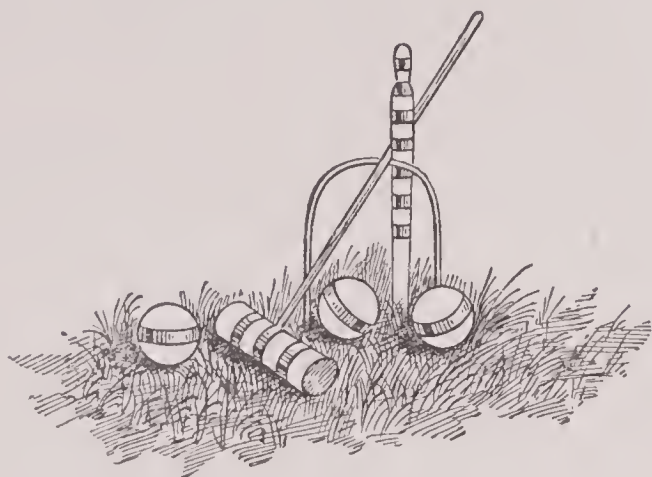
The ball is usually made of beech, or better of Turkey boxwood, and is about three and five-eighths inches in diameter. The balls are marked with different colors, so that they may easily be distinguished from one another. The number of players varies from two to eight,





and each may play alone, but usually the most interesting game is that in which four balls are used, with a player for each ball, or, that with two players, each using two balls.

The hoops are of iron or steel, and those in different sets vary both in diameter and in their width at the base. Those used in the original



game had a space of from fifteen to eighteen inches between the two legs, but perhaps the best width for ordinary play is from five and one-half to six inches. The latest hoops are rectangular in shape, and are to be preferred to the old-style hoops, which had rounded tops.

Three ways of setting the hoops are in common use, in which six, nine, or ten hoops are used, respectively. The six-hoop plan (Fig. I) is that used in championship games, and presents all the elements of difficult play. The two pegs, or posts, are driven into the ground as far apart as the field of play will permit, though they must be well inside the end boundaries, and in a line passing through the center of the field parallel to its longer sides. One of the hoops is placed on either side of each post, with its face in, and parallel to, an imaginary line passing through the post, at right angles to the medial line of the field, and at such distance from the post as to be well clear of the side boundaries. This disposes of four of the hoops, and each of the other two is placed at one-third the distance between the two posts, with its center in the line connecting them, and its face at right angles to that line.

In the nine-hoop arrangement (Fig. II), which is the one usually followed in lawn Croquet, the four side hoops are placed in the same line as above, but each two on the same side are moved closer together. Five hoops are placed in the line between the two posts, one being in the center of the field and two others near each post, one about three or four feet from it, and the other a similar distance from the first. The faces of all the hoops are at right angles to the line between the posts. The ten-hoop arrangement differs from the above only in having one more hoop placed in the center of the field, over, and at right angles to, the one already there. The object of this hoop is to make it more difficult for a ball to be driven through the original center hoop. (Fig. II.)

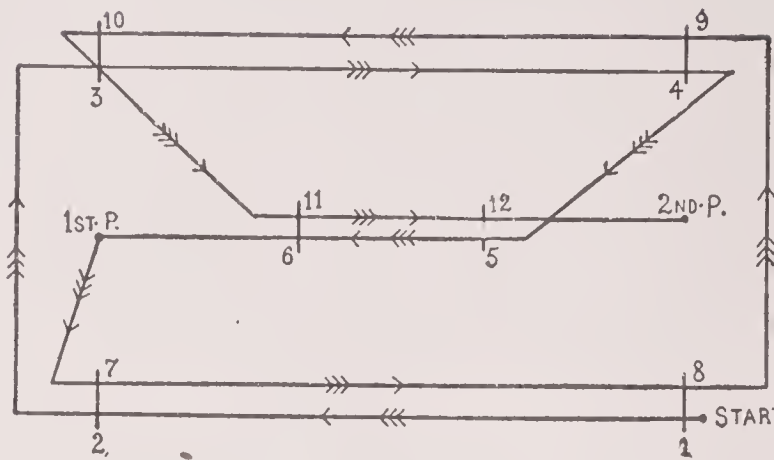
## THE GAME

A spot is plainly marked near one of the posts, and in beginning the game the ball is played from that spot. The object of the player

is, first, to drive his ball through each of the hoops in its proper order, and from the proper direction, then to strike the post at the other end with his ball, and, returning through the hoops in return order, to strike the first post.

In the accompanying explanations, the side that is to the player's right on starting is called the right side of the field, and the side to his left the left side of the field. (Fig. II.) The order in which the hoops and posts should be made in the nine-hoop game is as follows:—

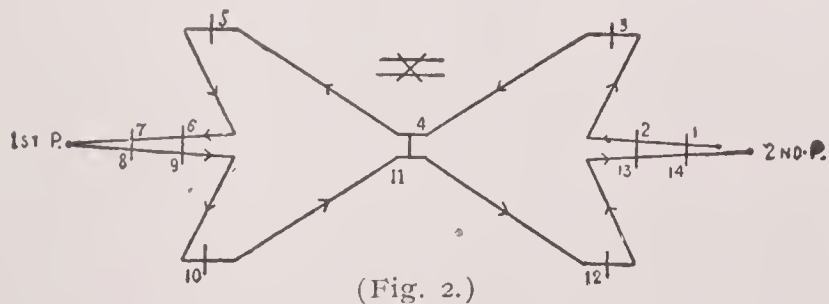
First two end hoops, first right side, center, second right side, second two end, second post; returning, second two end, second left side, center, first left side, first two end, first post. The ten-hoop game is played in the same order, except that in going from the first post to the second the ball must pass through the right side of the "cage," and on returning, the left side.



(Fig. I.)

In the six-hoop game the ball is started at the first left-side hoop and the order observed is as follows (Fig. I): First left side, second left side; returning, second right side, first right side; direct, first center, second center, second post; returning, second left, first left; direct, first right, second right; returning, second center, first center, first post.

The player who first completes the circuit of hoops and posts wins the game. A turn may consist of any number of strokes, since after the first a player may continue, if with that stroke he has either made his proper hoop or has hit another ball. In the former case he may attempt either to make another hoop or to hit a ball, but in the latter he is obliged to bring his own ball to that which has been hit, and, after placing them together, to strike his ball so that both are moved; this is termed "croqueting," or "roqueting," a ball. The player is then entitled to another stroke, and may either attempt to make his proper hoop or to hit another ball; if he



(Fig. 2.)

succeeds in either of these attempts, the foregoing process is repeated. He may not hit the same ball a second time, unless he has, in the meantime, passed through the hoop

that is next in order. As soon as a player fails in any shot his turn is ended, and the same process is gone through by the next player, the turns alternating in regular order.



The stroke that is easiest to learn, and that is really the safest, is made by standing over the ball, holding the mallet in both hands, and swinging it between the legs. The force of the stroke should not be given by the arms alone, but the weight of the body and mallet should be brought into play. This is the stroke common among children. The ball should always be struck with one of the end faces of the mallet. The one-hand stroke is much more graceful than that made with both hands, and is used by the best players.

There are also two kinds of strokes in croqueting another ball. The first of these is the push, or follow, stroke, and is designed to make two balls run together, and go practically the same distance. The mallet should be gripped loosely, and its head must follow the ball through the stroke, instead of being checked at the moment of contact. The other style of stroke is used to move one's own ball as little as possible, and to drive the other ball well away. The mallet should be gripped tightly, and a sharp "chop" stroke delivered, that shall hit the ball as low as possible. The swing of the mallet should be checked at the moment of contact.

In partnership games, each player should endeavor to keep as close to his partner as possible, so that each may take advantage of the proximity of the other's ball by playing on it.

Whenever a ball goes out of bounds, it is replaced on the field at a point three feet from where it crossed the boundary, and in a line at right angles to the latter.

## GLOSSARY

Following are some of the terms commonly used in a game of Croquet:—

*Blocked*—When the player finds a ball on which he cannot play, or a hoop or post in the way of a shot.

*Break*—A sequence of successful shots at balls or hoops.

*Cage*—Two hoops crossed at right angles in the center of the ground, as in the ten-hoop game.

*Croquet*—(a) The game itself. (b) To roquet, or strike, the ball of another player. (c) To strike the balls when set together. (*Roquet* is a term that is now very rarely used.)

*Dead Ball*—A ball that has gone through all the hoops in their proper order, and has hit the two posts.

*Double Shot*—Two balls, or a ball and the player's next hoop, which lie so close together that if he misses one he stands a good chance of making the other.

*Hollow Double*—Two balls, or a ball and the player's next hoop, which lie close together, but not so close as to make it likely that after missing one the player will make the other.

*Hoops*—The iron arches through which the ball must be driven.

*In hand*—A ball is said to be *in hand* when it has gone out of bounds, or has croqueted another ball, or when it is not in play for any other reason.

*Jump, or Leap-frog, Stroke*—A stroke that causes the player's ball to go completely over another.

*Loose Croquet*—A method of croqueting in which the player strikes his ball when set against another, without placing his foot on the former.

*Mallet*—The instrument used for driving the ball about the field.

*Pass Stroke*—Taking croquet so that both balls go in about the same direction, but the player's ball goes farthest.

*Peg, Post or Stick*—The sticks at either end of the field which must be hit by each ball in completing a game.

*Rover*—A ball that has passed through all the hoops in order, but has not hit the finishing post.

*Rush*—A position from which the player can hit another ball with his own so as to drive the former into a better position for taking croquet. Hence, *to get a rush upon a ball* is to put oneself in such a position.

*Setting*—The arrangement of the hoops and posts.

*Split Strokes*—Taking croquet so as to drive the two balls in directions nearly at right angles to each other.

*Stop Stroke*—Taking croquet so as to drive the object ball to a distance, while the player's ball remains near its original position.

*Strike Out*—To hit the finishing post, after having made all the hoops and the other post in proper order.

*Taking Croquet*—After hitting a ball, to carry one's own ball to it, set it down so that it remains in contact with the other, and then by hitting it to send both in the desired direction.

*Take Two Off*—To take croquet in such a way that the object ball moves only slightly, while the player's ball very nearly follows the line of the mallet's swing.

*Wired*—A ball is wired when either or both legs of a hoop prevent its being sent in the desired direction, or stand in the way of its being hit by an opponent.

Though there are numerous variations in different parts of the country, the following are the rules generally applied to the game of croquet:—

## RULES

1. *Hoops*—The hoops may be of any size, shape, or material that may be agreed upon by the players previous to a match.

2. *Mallets*—There shall be no restrictions as to the weight, size, shape, or material of the mallet; or as to the attitude or position of the strikers; or as to



the way in which the mallet is held, provided the ball be not struck with the middle or the back of the mallet head.

3. *Size of Balls*—The balls used in match play shall be three and five-eighths inches in diameter.

4. *Choice of Lead and of Balls*—It shall be decided by lot which side shall have the choice of lead and of balls. In a succession of games, the choice of lead shall alternate, and each side shall keep the same balls.

5. *Beginning of Game*—In beginning the game, each ball shall in turn be placed on the starting spot. (See *Settings*.) The striker's ball, when so placed and struck, is at once in play, and can croquet another, or be croqueted, whether it has made the first hoop or not.

6. *Stroke, When Taken*—A stroke is considered to be taken if a ball be moved by the striker in the act of striking; should a player, in taking aim, move his ball accidentally, it must be replaced to the satisfaction of the adversary, and the stroke must then be taken. If a ball be moved in taking aim, and then struck without being replaced, the stroke is foul. (Rule 26.)

7. *Hoop, When Run*—A ball has run its hoop when, after having been driven through it, either by a stroke of the player whose ball it is, or by being croqueted by another player, and having ceased to roll, it cannot be touched by a straight-edge placed against the wires on the side from which it was played.

8. *Ball Driven Partly through Hoop*—A ball driven partly through its hoop from the direction opposite that in which the hoop must be made, cannot run its hoop at its next stroke if it can be touched by a straight-edge placed against the wires on the side from which it was driven.

9. *Points Counted to Non-Striker's Ball*—A ball driven through its hoop, or against the turning peg, by any stroke not foul, whether by its owner or the adverse side, counts the point so made.

10. *Points Made for Adversary's Ball*—If the striker make a point for an adversary's ball, he must inform his adversary of it. Should the striker neglect to do so, and the adversary make the point again, he may continue his turn as though he had played for his right point.

11. *The Turn*—When playing his turn, a player may croquet each ball once, and may do this again after each point made. The player continues his turn as long as he makes a point or croquet.

12. *Taking Croquet Imperative after Croqueting*—A player who croquets a ball must take croquet, and in so doing must move both balls. (Rule 26.) In taking croquet, the striker is not allowed to place his foot on the ball.

13. *Ball in Hand after Croqueting*—No point or croquet can be made by a ball which is in hand, or not in play. If a ball in hand displace any other balls, they must remain where they are driven. Any point made in consequence of such displacement, counts, notwithstanding the fact that the ball displacing them is in hand.

14. *Balls Croqueted Simultaneously*—When a player croquets two balls simultaneously, he may choose from which of them he will take croquet; and a second croquet will be required before he can take croquet from the other ball.

15. *Balls Found Touching*—If, at the commencement of a turn, the striker's ball be found touching another, croquet is deemed to be made, and croquet must be taken at once.

16. *Croquet and Hoop Made by Same Stroke*—Should a ball in making its hoop croquet another ball that lies beyond the hoop, the hoop counts, as well as the croquet. A ball is deemed to be beyond the hoop if it lies so that it cannot be touched by a straight-edge placed against the wires on the playing side of the hoop. Should any part of the ball that is croqueted be lying on the playing side of the hoop, the croquet counts, but not the hoop.

17. *Pegging Out*—If a rover (except when in hand) be caused to hit the winning peg by any stroke of the same side, not foul, the rover is out of the game, and must be removed from the ground. A rover may similarly be pegged out by an adverse rover.

18. *Rover Pegged Out by Croquet*—A player who pegs out a rover by a croquet loses the remainder of his turn.

19. *Ball Sent Off the Ground*—A ball sent off the ground must at once be replaced at a point three feet within the boundary, measured from the spot where it went off, and at right angles to the margin. If this spot be already occupied by another ball, the ball last sent off is to be placed in contact with the other, on the side selected by the player who sent the ball off.

20. *Ball Sent Off Near Corner*—A ball sent off within three feet of a corner is to be replaced at a point three feet from both boundaries.

21. *Ball Touching Boundary*—If the boundary be marked by a line on the turf, a ball touching the line is deemed to be off the ground. If the boundary be raised, a ball touching the boundary is similarly deemed to be off the ground.

22. *Ball Sent Off and Returning to Ground*—If a ball be sent off the ground and return to it, the ball must be replaced as above, measuring from the point of first contact with the boundary.

23. *Ball Sent within Three Feet of Boundary*—A ball sent within three feet of the boundary, but not off the ground, is to be replaced as though it had been sent off, except in the case of the striker's ball, when the striker has the option of bringing his ball in, or of playing from where it lies.

24. *Boundary Interfering with Stroke*—If it be found that the height of the boundary interferes with the stroke, the striker, with the sanction of the umpire, may bring in the balls a greater distance than three feet, so as to allow a free swing of the mallet. Balls so brought in must be moved in the line of aim.

25. *Dead Boundary*—If, in taking croquet, the striker send his own ball, or the ball croqueted, off the ground, he loses the remainder of his turn; but if by the same stroke he make a croquet, his ball, being in hand, may pass the boundary without penalty. Should either ball, while rolling after a croquet, be touched or diverted from its course by an opponent, the striker has the option given him by Rule 27, and is not liable to lose his turn, should the ball which has been touched or diverted pass the boundary.

26. *Foul Strokes*—If a player make a foul stroke, he loses the remainder of his turn, and any point or croquet made by such stroke does not count. Balls moved by a foul stroke are to remain where they lie, or be replaced, at the option of the adversary. If the foul be made when taking croquet, and the adversary elect to have the balls replaced, they must be placed in contact, as they stood when the croquet was taken. The following are foul strokes:—

(a) To strike with the mallet another ball instead of, or besides, one's own, in making the stroke.

(b) To "spoon"—i.e., to push a ball without an audible knock.



(c) To strike a ball twice in the same stroke.

(d) To touch, stop or divert the course of a ball when in play and rolling, whether this be done by the striker or by his partner.

(e) To allow a ball to touch the mallet in rebounding from a peg or wire.

(f) To move a ball which lies close to a peg or wire by striking the peg or wire.

(g) To press a ball around a peg or wire ("crushing stroke").

(h) To play a stroke after croquet without taking croquet.

(i) To fail to move both balls in taking croquet.

(j) To croquet a ball which the striker is not entitled to croquet.

27. *Ball Touched by Adversary*—Should a ball, when rolling, except it be in hand, be touched, stopped or diverted from its course by an adversary, the striker may elect whether he will take the stroke again, or whether the ball shall remain where it stopped, or be placed on the spot to which, in the judgment of the umpire, it would have rolled.

28. *Playing Out of Turn, or with the Wrong Ball*—If a player play out of turn, or with the wrong ball, the remainder of the turn is lost, as is also any point or croquet made after the mistake. The balls either remain where they lie when the penalty is claimed, or are placed as they were before the last stroke was made, at the option of the adversary. But if the adverse side play without claiming the penalty, the turn holds good, and any point or points made after the mistake are scored to the ball by which they have been made, except when the adversary's ball has been played, in which case the points are scored to the ball which ought to have been played. If more than one ball be played during the turn, all points made during that turn, whether before or after the mistake, are scored to the ball last played. Whether the penalty be claimed or not, the adversary may follow with either ball of his own side.

29. *Playing for Wrong Point*—If a player make a wrong point it does not count, and, therefore (unless, by the same stroke, he has taken croquet or has made a croquet), all subsequent strokes are in error, and the remainder of the turn is lost, as well as any point or croquet made after the mistake. The balls remain where they lie when the penalty is claimed, or are replaced as they were before the last stroke was made, at the option of the adversary. But if the player make another point, or the adverse side play, before the penalty is claimed, the turn holds good, and the player who made the mistake is deemed to be for the point next in order after that which he last made.

30. *Information as to Score*—Every player is entitled to be informed which is the next point of any ball.

31. *Wire Knocked Out of Ground*—Should a player, in trying to run his hoop, knock a wire of that hoop out of the ground with his ball, the hoop does not count. The ball must be replaced, and the stroke taken again; but if by the same stroke a croquet be made, the striker may elect whether he will claim the croquet or have the balls replaced.

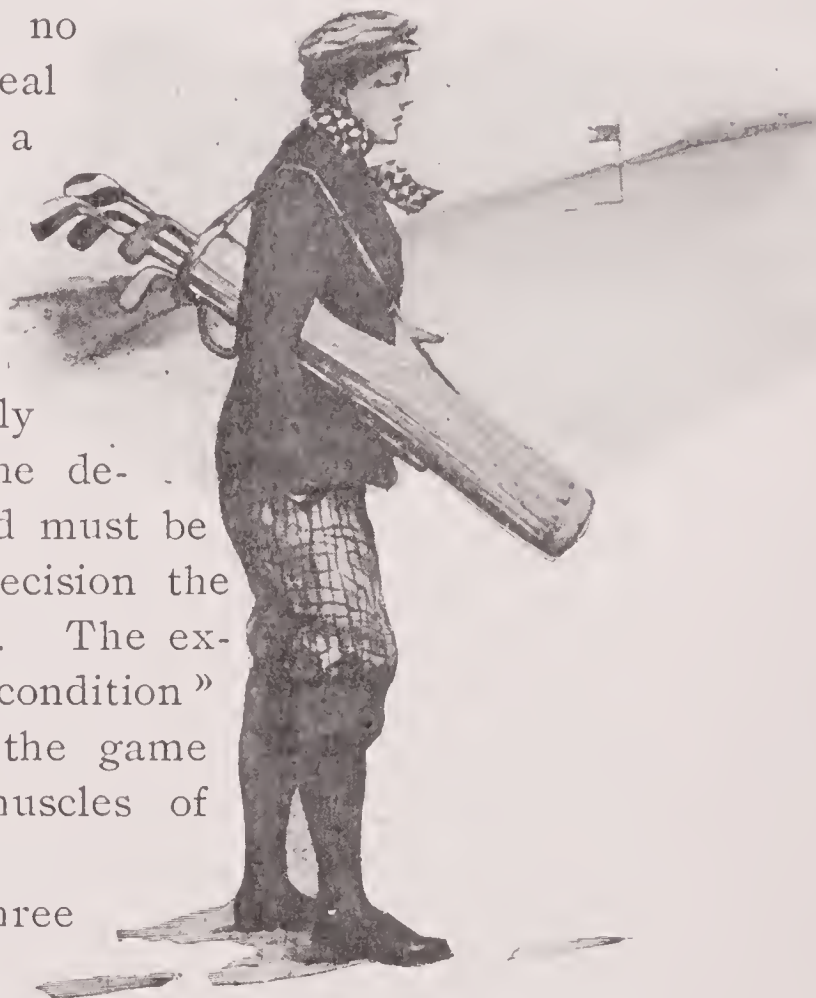
32. *Pegs or Hoops Not Upright*—Any player may set upright a peg or hoop, except the one next in order, which must not be altered except by the umpire.

33. *Ball Lying in a Hole or on Bad Ground*—A ball lying in a hole or on bad ground may be moved with the sanction of the umpire. The ball must be put back,—i. e., away from the object aimed at,—and in such a position as not to alter the line of aim.

## GOLF

THE game of Golf, though but recently introduced into this country, has made rapid strides in public favor. Unlike the other outdoor games, Golf not only can be played the year round, but it numbers among its devotees both men and women, of all ages, from early youth to post-maturity. Golfing combines mental with physical exercise in a manner that is possible in no other game, for, like the surface of the ideal Golf link, the game itself presents a series of perpetual changes. Even in going several times over the same course, the difficulties and complications will be varied each time. The mind must be constantly on the alert to discover promptly just what action will best bring about the desired result, and the eye and the hand must be ever ready to carry out with skilful precision the impulses conveyed to them by the brain. The exercise need not be violent, nor does "condition" in Golf imply physical perfection; yet the game calls into play a great number of the muscles of the human body.

Golf *courses* vary in length from three to five miles, and are usually in the form of an irregular circle, or oval. They generally have eighteen *holes*, though if the course be short, the number may be limited to fifteen, twelve, or even nine. These holes are four and one-fourth inches in diameter and four inches in depth, their proper size and shape being preserved by metal linings, the upper edge of which, however, must not be within an inch of the surface of the ground. The holes need not be equidistant, but should not be less than one hundred yards, nor more than five hundred yards, apart, and, if possible, they should be so arranged that *hazards* will intervene between each hole and the one next succeeding. In general terms, a hazard is an obstruction, such as a tree, fence, road, water, rough ground, etc., and it is in avoiding these hazards that the greatest skill in Golf is shown. Should the ground selected for the *links* not afford a sufficient number of hazards, sand pits, ditches, and other obstructions should be made, and should be so placed as to catch badly-played balls; while plenty of space should be left between them





to reward good strokes. Hazards which are not visible to the player, such as blind ditches or holes, should be marked or filled.

The space within a radius of about thirty yards around each hole is called the *putting green*. The surface of this space should be smooth, though not necessarily flat. For each hole there is a starting point, or *teeing ground*, which should be near the hole, but not in the line between it and the preceding or the succeeding one. There is also a *teeing ground* at the beginning of the course. A box of sand is usually placed near the teeing ground, from which sand may be taken with which to slightly elevate the ball on a tee, thus affording an opportunity for a clear and effective drive.

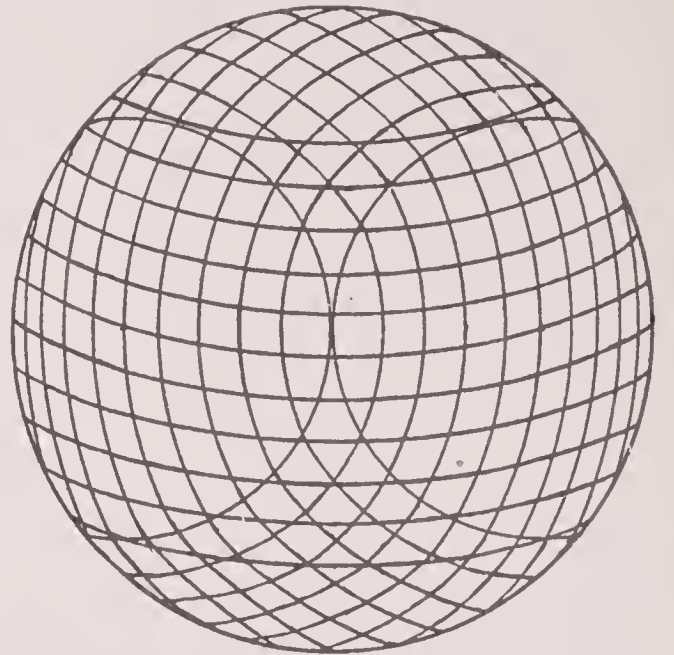
The game of Golf consists in playing a ball, in as few strokes as possible, into a succession of holes, each hole being won by the side making it in the least number of strokes; and the victory of the game goes to the side winning the largest number of holes, or to the side making all the holes in the least number of strokes. The former is called "Match play"; the latter, "Medal play." Should one side gain more holes ahead than remain to be played, the game need not be completed, as it is obvious that the other side will be beaten; but if the score is even at the last hole but one, the side that finishes in the least number of strokes, wins.

Golf may be played on almost any meadowland where the grass is not too long, and where sufficient space is available. The ground best suited for the purpose is undulating, sandy soil, the greater part of which is covered with short turf. This should be interspersed with sand holes, or *bunkers*, which constitute the best form of hazards. For this reason the golfing links, or *green*, should have a goodly number of hazards; but trees, which are not legitimate hazards, should be avoided, whenever possible, in laying out the course.

A long rod surmounted by a flag is placed in each hole, in such a way that it can easily be removed; the flags for half the circuit are of one color, while those indicating the return route are of some color which is in marked contrast to the other. Whenever a player nears a hole, the flag is removed until the hole is made, after which it is replaced. If a hole is screened so as not to be visible from the one that preceded it, a flag of some special color or design is placed between the two to indicate their direction from each other.

The balls generally used in Golf are about one and three-fourths inches in diameter, though they vary in size and weight according to their numbers, which are 26, 27, 27½ and 28. Sizes Nos. 27 and 27½ are the ones most commonly used. The material of which they are made is generally some compound of gutta-percha, and the surface of the ball, which is painted white, is grooved or notched. (Fig. 4.)

In Golf there are usually either two, three, or four players, and the games are designated respectively, *singles*, *three-ball*, and *foursome*, according to the number of contestants. The order of play is agreed on before the start is made. In a game of singles, two persons play, and each has a ball. The score is by holes, and not by the number of strokes required for the entire round of the course. In foursome games, two of the players oppose the other two; only two balls are used, each side having its own ball, and the score is usually by strokes, instead of by holes. Three-ball games are usually played in the same manner as singles; each player has his own ball and the score may be either by strokes or by holes. Should one player be what is termed the "best ball" of the three, the score is by holes, and in order to win a hole, the "best ball" must make it in a less number of strokes than either of the other players.



(Fig. 4)

A Golf game is started from the teeing ground, and the player who strikes first is said to have the "honor." The players strike in turn from the first tee, and after all have struck, the player who is farthest from the hole plays again, the one who is then farthest away plays next, and so on until each player has put his ball into the first hole. The player who has made the hole in the fewest strokes wins it, and if two players have taken the same number of strokes, the hole is said to be "halved," that is, it is not won by either player. The order of beginning play for the second hole corresponds to the order in which the first was made, the winner striking first. The ball is never touched by a player with his hand, except when taking it out of the regular holes. If the player takes the ball out of any bunker or unfavorable ground, instead of playing it out, he loses two strokes, besides missing much of the pleasure and excitement of the game.

It will be seen that the winner of a "match play" game may not have won that same game in "medal play," and *vice versa*. Thus, if A takes four strokes to the first hole, and B seven, A wins one hole; but B may take the next in four strokes while A requires nine; each will then have won a hole, but A will have taken twelve strokes while B has taken only ten.

There are two general styles of clubs used in playing Golf, known as wood clubs and iron clubs, which differ only in the material of which the head is made. Each style has handles, or shafts, usually made of hickory, which is considered the best wood for the purpose.



Heads for wood clubs are usually made of dogwood, beach, or persimmon, the former being considered the best material.

### GOLF CLUBS

Following is a list of the clubs used in Golf:—

#### WOOD CLUBS.

Driver.  
Long Spoon.  
Mid Spoon.  
Short Spoon.  
Baffy.  
Brassie Niblic.  
Bulger Brassie.  
Brassie.  
Putter.

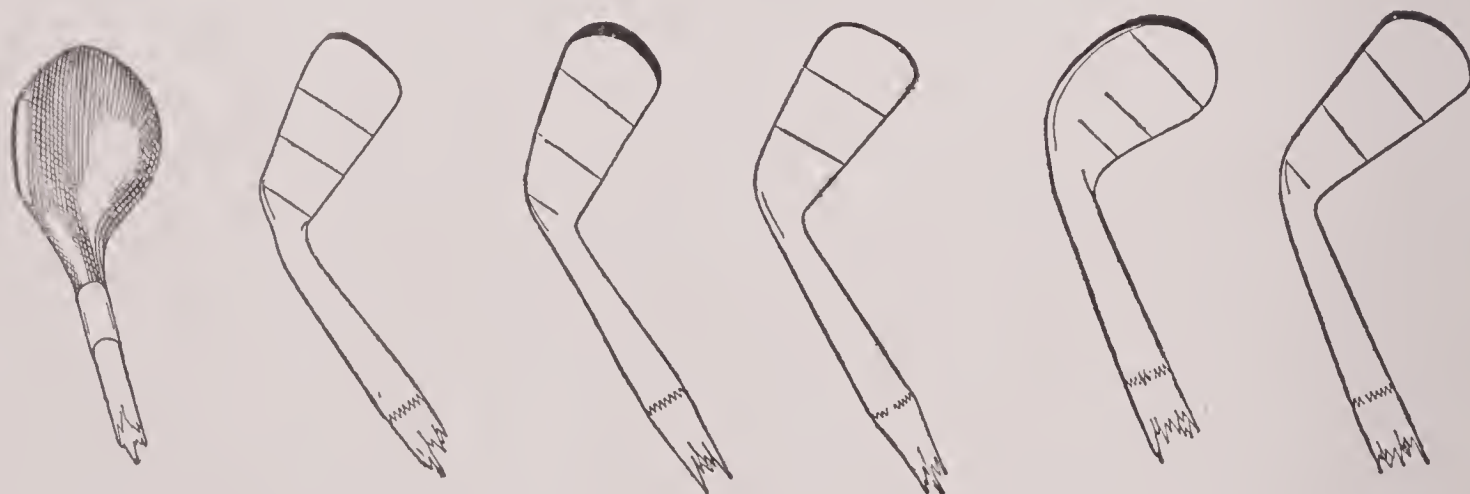
#### IRON CLUBS.

Cleek.  
Iron Niblic.  
Putting Cleek.  
Driving Cleek.  
Lofting Iron.  
Driving Iron.  
Mashie.  
Gun Metal Putter.  
Medium Iron.

The *Driver*, or *Play Club*, is the longest of the clubs, and is used in driving from the tee, or whenever the ball is lying in a good position and a long drive is required.

The *Brassie* is similar to the driver, except that it has a brass plate on its sole, and is shaped so as to be slightly more suitable for lofting. It is used when the ball is on the putting-green.

The *Brassie Niblic* has a much smaller head than the driver; its face is spoon shaped, and its sole is shod with brass. It is used to raise the ball from a depression.



Driver or Brassie.

Putter.

Putting Cleek.

Driving Mashie.

Niblic.

Mid Iron.

The *Long*, *Short*, and *Mid Spoons* have heads like that of the brassie, except that the face is very much spooned. These clubs are now little used.

The *Putter* has a short, stiff handle, to which the head is inclined nearly at right angles. It is used for playing short strokes on the putting-green.

The *Cleek* is the longest driver of all the iron clubs.

The *Driving Iron* is not so long a driver as the cleek, but will elevate the ball more. Its blade is deeper than that of the cleek.

The *Mashie*, which is a compromise between the lofting iron and the niblic, has a shorter head than the former, and its head is shaped somewhat differently from that of the latter. It is used for short approaches.

The *Niblic*, like the brassie and cleek, is used in very awkward hazards. It has a small, rounded head, which is very heavy.

The *Lofting Iron* is similar to the driving iron, but its head is shaped so as to elevate the ball.

The *Mid Iron* is similar to the lofting iron, and is used for long, high drives.

It is not necessary to have all of these clubs, but while the player will be able to get along very well with only the driver, cleek, iron, and putter, it is advisable for him to add the brassie niblic and mashie.

## GLOSSARY

Following are some of the technical expressions used in connection with the game of Golf:—

*Addressing the Ball*—Preparing to strike the ball.

*All Even, or All Square*—When neither side has gained an advantage.

*Approach*—When the player is sufficiently near the hole to be able to drive the ball to the putting-green, his stroke is called the “approach shot.”

*Baff*—To strike the ground with the “sole” of the club-head in playing, so as to send the ball into the air.

*Baffy, or Baffing Spoon*—A wooden club used in playing lofting shots.

*Bent*—Long, wiry grass.

*Bisque*—A point taken by a player to whom odds has been given.

*Blind Hole, or Blind Hazard*—A blind hole is one that is so situated that its putting-green is not visible to the player. A blind hazard is one that cannot be seen.

*Bogey, usually Colonel Bogey*—An imaginary opponent credited with a certain score for each hole, against which score each player is competing.

*Bone*—A piece of ram's horn or vulcanite inserted in the sole of the club to prevent it from splitting.

*Borrow*—To play a ball up a steep hill or slope.

*Brassie*—A wooden club with a brass sole.

*Break-club*—A hard object lying near a ball, on which the club might be broken in striking.

*Bulger*—A club with a convex face.

*Bunker*—Generally, any rough, hazardous ground; more strictly, a sand pit.

*Bye*—Any hole or holes that remain to be played after the match is finished.

*Caddie*—A person who carries the golfer's clubs and tees the ball, and who can usually give advice in regard to the game.

*Carry*—The distance between the spot from which the ball is driven, and that at which it first touches the ground.





*Cleek*—An iron-headed club of considerable driving power, which is sometimes used for putting.

*Club*—The implement with which the ball is struck.

*Course*—That portion of the link on which the game is played.

*Cup*—Any hole in the ground of the course.

*Cut*—To cause the ball to spin so as to stop where it falls.

*Dead*—A ball is said to be "dead" when it lies so near the hole that the "putt" is a certainty. A ball is said to "fall dead" when it does not roll after alighting.

*Divot*—A slice of turf cut out in playing a stroke.

*Dormy*—One side is said to be "dormy" when it has as many holes ahead of its opponent as there remain holes to be played.

*Down*—A player is said to be "down" when his opponent is one or more holes ahead of him.

*Draw*—To drive widely to the left hand. (Identical in its results with *hook* and *screw*.)

*Driver*—See Play Club.

*Duff*—To hit the ground when making a stroke, so that the ball goes only a short distance.

*Face*—First, the slope of a bunker or hillock; second, the part of the club-head which strikes the ball.

*Flat*—A club is said to be "flat" when its head is at a very obtuse angle to the shaft.

*Fog*—Moss, or long, coarse grass.

*Foosle*—A bad stroke that does not miss the ball altogether.

*Fore*—A warning cry to any person in the way of a stroke. (Contracted from "before.")

*Fore-caddie*—The boy who precedes the players.

*Foursome*—A match in which two play on each side.

*Full Shot*—A shot played with a full swing.

*Gobble*—A rapid, straight "putt" into the hole, such that, had the ball not gone in, it would have gone some distance beyond.

*Grassed*—Said of a club the face of which is slightly "spooned," or sloped backward.

*Green*—First, the whole links; second, the putting-ground around each hole.

*Grief*—A player is said to be in "grief" when he has played his ball into a hazard.

*Grip*—First, the part of the handle covered with leather, by which the club is grasped; second, the grasp itself.

*Gutty*—A gutta-percha Golf ball.

*Half-one*—A handicap of one stroke, deducted every second hole.

*Half-shot*—Less than a full swing.

*Halved*—A hole is said to be "halved" when each side has taken the same number of strokes in making it. A "halved match" is a "drawn game."



*Hanging*—A “hanging” ball is one which lies on a downward slope.

*Hazard*—A general term for a bunker, long grass, a road, water, a whin, a molehill or other obstacle.

*Head*—The head is the lowest part of a club, and possesses a *sole*, a *heel*, a *toe* or *nose*, a *neck*, and a *face*.

*Heel*—First, the part of the head nearest the shaft; second, to hit from this part and send the ball to the right.

*Hole*—First, the four-inch hole lined with iron; second, the whole space between any two of these.

*Hole High*—A ball played upon the putting-green from a distance.

*Honor*—The right to play off first from the tee.

*Hook*—See Draw.

*Hose*—The socket in iron-headed clubs into which the wooden shaft fits.

*Iron*—A club with an iron head, which is shaped so as to elevate the ball.

*Jerk*—In “jerking,” the club should strike with a quick cut behind the ball, and should stop on reaching the ground.

*Lie*—First, the inclination of a club when held on the ground in a natural position for striking; second, the situation of a ball, which may be good or bad.

*Lift*—To take a ball out of a hazard.

*Like*—See Odds.

*Like-as-we-lie*—When both sides have played the same number of strokes.

*Links*—The open downs or heath on which Golf is played.

*Loft*—To elevate the ball.

*Lofting Iron*—A club used in lofting the ball.

*Long-odds*—When a player has to play a stroke more than his adversary, who is much nearer the hole.

*Made*—A player, or his ball, is said to be “made” when his ball is sufficiently near the hole to be played on the putting-green at the next shot.

*Mashie*—A club that is a compromise between a niblic and an iron.

*Match*—First, the sides playing against each other; second, the game itself.

*Match Play*—That form of the game in which the holes are counted.

*Medal Play*—The style of game in which the number of strokes taken in the round determines the score.

*Miss the Glove*—To fail to strike the ball, either by swinging the club clear of its top, or by hitting the ground behind it.

*Neck*—The crook of the head of the club where it joins the shaft.

*Niblic*—A small, narrow-headed, heavy iron club.

*Nose*—The point, or front portion, of the club head.

*Odds*—First, means the handicap given by a strong player to a weaker in a single match. This may consist either of one, two, or three or more holes to start with, or of one stroke at each hole, or at every alternate hole, or at every third hole, etc. Second, to have “played the odds” is



to have played one stroke more than your adversary. If your opponent has "played the odds," that is, one stroke more than you, your next stroke will be the "like"; if he has played two strokes more, that is, the "two more," your next stroke will be the "one-off-two"; if the "three more," the "one-off-three," and so on.

*Par* — The number of strokes that would be required for a hole if no mistakes were made.

*Play-club* — A wooden-headed club which has a long shaft that is more or less supple.

*Press* — To strive to recover lost ground by hitting especially hard.

*Putt* — To play the delicate game that is required when near the hole. (Pronounce the *u* as in *but*.)

*Putter* — An upright, stiff-shafted club, with a head usually made of wood, but sometimes of iron.

*Putty* — A Golf ball made of composition.

*Quarter Shot* — A shot made by a quarter swing from the wrists.

*Rind* — A strip of cloth under the leather to thicken the grip.

*Round* — The complete circuit of the course.

*Run* — First, the distance a ball travels on the ground; second, to make the ball travel on the ground, instead of lofting it.

*Scare* — The narrow part of the club-head by which it is glued to the handle.

*Sclaff* — When the club-head strikes the ground behind the ball and follows on with a ricochet.

*Scruff* — To raise the grass slightly in striking.

*Set* — A full complement of clubs.

*Shaft* — The stick or handle of the club.

*Short Game* — Approaching and putting.

*Slice* — To draw the face of the club across the ball so that it curves to the right.

*Sole* — The flat bottom of the club-head.

*Spoon* — Wooden-headed clubs of three lengths — long, middle, and short; the face is scooped so as to loft the ball.

*Spring* — The degree of suppleness in the shaft.

*Square* — When the game stands evenly balanced, neither side being any holes ahead.

*Stance* — The position of the player's feet when addressing the ball.

*Steal* — To hole an unlikely "putt" from a distance, but not by a "gobble."

*Stroke* — The act of hitting the ball with the club, or the attempt to do so.

*Stymie* — When your opponent's ball lies in the line of your "putt."

*Swing* — The sweep of the club in driving.

*Swipe* — A full, driving stroke.



*Tee* — The pat of sand on which the ball is placed for the first stroke at each hole.

*Teeing Ground* — The marked space from which the ball must be played at the beginning of each hole.

*Third* — A handicap of a stroke deducted every third hole.

*Toe* — Another name for the nose of the club.

*Top* — To hit the ball above its center.

*Up* — When a player has gained one or more holes on his opponent.

*Upright* — A club is said to be "upright" when its head is not at a very obtuse angle to the shaft.

*Whins* — Furze, or gorse.

*Wrist shot* — Less than a half shot, generally played with an iron club.

## RULES OF GOLF

Following are the rules of Golf adopted by the United States Golf Association:—

### RULE I

#### DEFINITIONS

(a) The game of Golf is played by sides, each of which plays its own ball. A side may consist of either one or two players. If one player oppose another, the match is called a "single." If two play against two, it is called a "foursome." A single player may play against two, when the match is called a "threesome," or three players may play against each other, each playing his own ball, when the match is called a "three-ball match."

"Match play" is decided by the number of holes won.

"Medal play" is decided by the aggregate number of strokes.

"Colonel Bogey" is an imaginary opponent, against whose arbitrary scores each competitor plays by holes; otherwise bogey competitions are governed by the special rules for stroke competitions, except that a competitor loses the hole when his ball is lost, and when his ball is not played where it lies, except as otherwise provided in the rules.

(b) The game consists in each side playing a ball from a teeing ground into a hole, by successive strokes, and the hole is won by the side which holes its ball in fewer strokes than the opposite side, except as otherwise provided in the rules. If the sides hole out in the same number of strokes, the hole is "halved."

In match play, when two competitors halve their match, they shall continue playing, hole by hole, till one or the other shall have won a hole, which shall determine the winner of the match.

Should the match-play competition be a handicap, the competitors must decide a tie by playing either one, three or five more holes, according to the manner in which the handicap ceded falls upon certain holes, so as to make the extra holes a fairly proportionate representation of the round.

In medal play, when two or more competitors are tied, the winner shall be determined by another round of the course; except that By-laws 15 and 18 of the





United States Golf Association provide that, in case of ties for the sixteenth place in the amateur championship medal-rounds, or the eighth place in the woman's championship medal-rounds, respectively, the contestants so tied shall continue to play until one or the other shall have gained a lead by strokes, the hole or holes to be played out.

(c) The teeing ground shall be indicated by two marks placed in line as nearly as possible at right angles to the course.

The holes shall be four and one-fourth inches in diameter, and at least four inches in depth.

(d) The term "putting-green" shall mean all ground within twenty yards of the hole, except hazards.

(e) A "hazard" shall be any bunker, water (except casual water), sand, path, road, railway, whin, bush, rushes, rabbit scrape, fence or ditch. Sand blown upon the grass, or sprinkled upon the course for its preservation, bare patches, snow and ice are not hazards. Permanent grass within a hazard shall not be considered part of the hazard.

(f) The term "through the green" shall mean all parts of the course except hazards and the putting-green which is being played to.

(g) The term "out of bounds" shall mean any place outside the defined or recognized boundaries of the course.

(h) "Casual water" shall mean any temporary accumulation of water (whether caused by rainfall or otherwise) which is not one of the ordinary and recognized hazards of the course.

(i) A ball shall be "in play" as soon as the player has made a stroke at the teeing ground in each hole, and shall remain in play until "holes out," except when "lifted" in accordance with the rules.

(j) A ball shall be considered to have "moved" only if it leave its original position in the least degree, and stop in another; but if it merely oscillates, without leaving its original position, it shall not be considered to have "moved."

(k) A ball shall be considered "lost" if it is not to be found within five minutes after the search for it is begun.

(l) A "match" shall consist of one round of the links, unless it be otherwise agreed.

A match is won by the side which is leading by a number of holes greater than the number of holes remaining to be played. If each side win the same number of holes, the match is halved.

(m) A "stroke" shall be any movement of the ball caused by one player, except as provided in Rule IV, or any downward movement of the club made with the intention of striking the ball.

(n) A "penalty stroke" is a stroke added to the score of a side under certain rules, and shall not affect the rotation of the play.

(o) The privilege of playing first from a teeing ground is called "the honor."

(p) "Addressing the ball" means that a player has taken up his position preparatory to striking the ball.

(q) The reckoning of the strokes is kept by the terms the "off," "two more," "three more," etc., and "one-off-three," "one-off-two," "the like." The reckoning of holes is kept by the terms, so many "holes up," or "all even," and so many "to play."

## RULE II

A match begins by each side playing a ball from the first teeing ground.

The player who is to play first on each side shall be named by his own side.

The option of taking the honor at the first teeing ground shall be decided by lot, if necessary.

A ball played from in front of, or outside of, or more than two-clubs lengths behind, the two marks indicating the teeing ground, or played by a player when his opponent should have had the honor, may be at once recalled by the opposite side, and may be re-teed.

The side which wins a hole shall have the honor at the next teeing ground. If a hole has been halved, the side which had the honor at the last teeing ground shall again have the honor.

On beginning a new match, the winner of the long match in the previous round shall have the honor, or if the previous match was halved, the side which last won the hole shall have the honor.

*Penalty for playing a ball outside the limits of teeing ground:*—In match play, the ball may at once be recalled by the opponent, no stroke being counted for the misplay; in medal play, disqualification.

*Penalty for leading off the tee out of turn:*—In match play, the ball may at once be recalled by the opponent, no stroke being counted for the misplay; in medal play, no penalty, but it is customary to observe the honor.

### RULE III

A player shall not play while his ball is moving, under penalty of the loss of the hole. But if the ball begin to move while the player is making his upward or downward swing, he shall incur no penalty, except as provided in Rules X and XXVII, and a stroke lost under Rule XXVII shall not, under these circumstances, be counted as a stroke of the player.

*Penalty for playing a moving ball (except at the tee):*—In match play, loss of a hole; in medal play, two strokes.

But if the ball move while the player is making his upward or downward swing, a penalty is incurred only if the player is deemed to have caused the movement under Rules X and XVIII, by moving or touching any loose impediment; or under Rule XXVII, by grounding his club; or in a hazard, by taking his stand to play it. In these cases the penalty shall be: In match play, one stroke; in medal play, one stroke.

### RULE IV

If the ball fall or be knocked off the tee in addressing it, no penalty shall be incurred, and it may be replaced; if struck when moving, no penalty shall be incurred.

### RULE V

In a "threesome" or "foursome," the partners shall strike off alternately from the teeing grounds, and shall strike alternately during the play of the hole.

If a player play when his partner should have done so, his side shall lose the hole in match play; and in medal play, shall lose two strokes.

### RULE VI

When the balls are in play, the ball farthest from the hole which the players are approaching shall be played first, except as otherwise provided in Rule XXXII and in Medal Rule II.

The penalty for playing out of turn shall be: In match play, the ball may at once be recalled by the opponent, no stroke being counted for the misplay; in medal play, no penalty, but the ball may be recalled.



A ball so recalled shall be dropped as near as possible to the place where it originally lay.

#### RULE VII

The ball must be fairly struck at, not pushed, scraped, or spooned, under penalty of the loss of the hole in match play, or of two strokes in medal play.

#### RULE VIII

A ball must be played wherever it lies, or the hole must be given up, except as otherwise provided in Rules 9, 11, 13, 15, 17, 22, 23, 28, 31, 32, 34.

*Penalty:* In match play, loss of the hole; in medal play, loss of two strokes, except as otherwise provided in Medal Rules 6, 8, 9, 10, 11.

#### RULE IX

Unless with the opponent's consent, a ball in play shall not be moved or touched before the hole is played out, under penalty of one stroke, except as otherwise provided in Rules 11, 13, 15, 17, 22, 23, 28, 31, 34, and Medal Rules 6, 8, 9, 10, 11. But the player may touch his ball with his club, in the act of addressing it, without penalty.

If the player's ball move the opponent's ball through the green, the opponent, if he choose, may drop a ball (without penalty), as near as possible to the place where it lay, but this must be done before another stroke is played.

*Penalty for moving or touching:* In match play, one stroke; in medal play one stroke.

If a competitor's ball be displaced by another competitor's ball it must be replaced, or its owner be disqualified.

#### RULE X

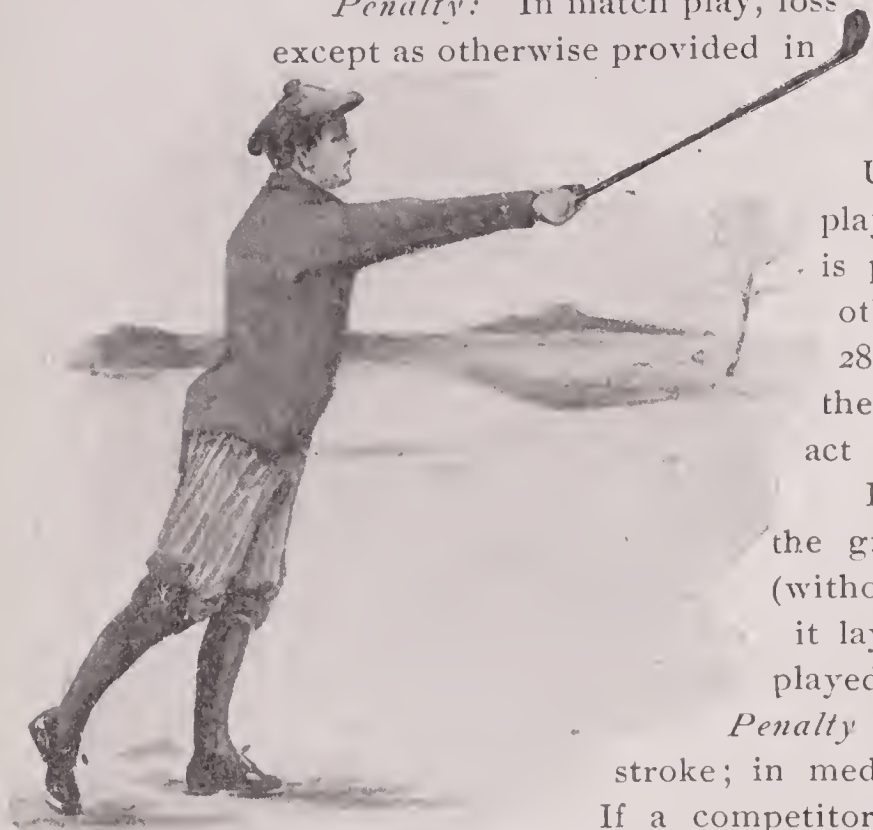
Any loose impediment (not being in, or touching, a hazard), which is within a club length of the ball, may be removed. If the player's ball move after any such loose impediment has been touched by the player, his partner or either of their caddies, the penalty shall be one stroke, in either match play or medal play. If any loose impediment (not being on the putting-green), which is more than a club length from the ball, be removed, the penalty shall be the loss of the hole in match play, or of two strokes in medal play.

#### RULE XI

Any vessel, wheelbarrow, tool, roller, grass-cutter, box, or similar obstruction may be removed. If a ball be moved in so doing, it may be replaced without penalty. A ball lying on, or touching, such obstruction, or on clothes, nets, or grounds under repair, or covered up, or opened for the purpose of the upkeep of the links, may be lifted and dropped without penalty, as near as possible to the place where it lay, but not nearer the hole. A ball lifted in a hazard, under such circumstances, shall be dropped in the hazard.

A ball lying in a Golf hole or flag hole, or in a hole made by the green-keeper, may be lifted and dropped without penalty as near as possible to the place where it lay, but not nearer to the hole.

"As near as possible" shall mean within a club length.



If a ball lie on, or within a club length of, a drain cover, water pipe or hydrant, it may be lifted and dropped, without penalty, as near as possible to the place where it lay, but not nearer the hole.

## RULE XII

Before striking a ball in play, the player shall not move, bend or break anything fixed or growing near the ball, except in the act of placing his feet on the ground for the purpose of addressing the ball, in soling his club to address the ball, and in his upward or downward swing, under penalty of the loss of the hole, except as otherwise provided in Rules 11, 13, 30.

*Penalty:* In match play, loss of the hole; in medal play, loss of two strokes.

## RULE XIII

When a ball lies in, or touches, a hazard, nothing shall be done to improve its lie; the club shall not touch the ground, nor shall anything be touched or moved before the player strikes at the ball, subject to the following exceptions: (1) The player may place his feet firmly on the ground for the purpose of addressing the ball. (2) In addressing the ball, or in the upward or downward swing, any grass, bent whin or other growing substance, or the side of a bunker, wall, paling or other immovable obstacle may be touched. (3) Steps or planks placed in a hazard by the green committee for access to, or egress from, such hazard may be removed, and if a ball be moved in so doing, it may be replaced without penalty. (4) Any loose impediment may be removed from the putting-green. (5) The player shall be entitled to find his ball as provided in Rule 30. The penalty for a breach of this rule shall be loss of the hole, in match play, or of two strokes in medal play.

## RULE XIV

A player or caddie shall not press down, or remove, any irregularities of the surface near a ball in play. Dung, worm casts, or molehills may be removed (but not pressed down) without penalty. The penalty for a breach of this rule shall be loss of the hole in match play, or of two strokes in medal play.

Pressing down the surface behind the ball by prolonged or forcible grounding of the club, shall be deemed a breach of this rule.

## RULE XV

If a ball lie, or be lost, in water, the player may drop a ball, under penalty of one stroke in either match or medal play. But if a ball lie or be lost (1) in casual water through the green, a ball may be dropped without penalty; (2) in water in a hazard, or in casual water in a hazard, a ball may be dropped behind the hazard, under penalty of one stroke; (3) in casual water on a putting-green, a ball may be placed by hand behind the water, without penalty.

A ball lifted from a recognized water hazard may be dropped, under penalty of one stroke, even if the hazard be dry at the time.

If the water in a recognized water hazard overflow its usual boundaries, the overflowed portion of the course shall be considered as part of the hazard and not as casual water.

If a ball lie, or be lost, in casual water in a hazard, a ball may be dropped, without penalty, behind the water, but in the hazard, and in line between the spot where it entered the water and the hole.





## RULE XVI

When a ball has to be dropped, the player himself shall drop it. He shall face the hole, stand erect behind the hazard or casual water, keep the spot from which the ball was lifted (or in case of water or casual water, the spot at which it entered) in a line between himself and the hole, and drop the ball behind him from his head,

standing as far behind the hazard or casual water as he may please. If it be impossible to drop the ball behind the hazard or casual water, it shall be dropped as near as possible to the place where it lay, but not nearer to the hole. If the ball so dropped touch the player dropping it, there shall be no further penalty, and if the ball roll into a hazard, it may be redropped without further penalty.

*Penalty for a ball not dropped in accordance with this rule:* In match play, the opponent may call for the player to drop again, and if the request be not complied with, the player shall lose the hole. In medal play, the ball must be dropped again or the competitor disqualified.

## RULE XVII

When the balls lie within six inches of each other on a putting-green, or within a club length of each other through the green, or in a hazard (the distance to be measured from their nearest points), the ball nearer the hole may be lifted at the option of either the player or the opponent, until the other is played, and shall then be replaced as near as possible to the place where it lay. If the ball farther from the hole be moved in so doing, or in measuring the distance, it shall be replaced without penalty. If the lie of the lifted ball be altered by the player in playing, the ball may be placed in a lie as nearly as possible similar to that from which it was lifted, but not nearer to the hole.

## RULE XVIII

Any loose impediment may be removed from the putting-green, irrespective of the position of the player's ball. The opponent's ball may not be moved, except as provided in Rule XVII. If the player's ball move after any loose impediment lying within six inches of it has been touched by the player, his partner or either of their caddies, the penalty shall be one stroke, in either match or medal play.

## RULE XIX

When the ball is on the putting-green, the player or his caddie may remove (but not press down) sand, earth, dung, worm casts, molehills, snow or ice lying around the hole, or in the line of his putt. This shall be done by brushing lightly, with the hand only, across the putt and not along it. Dung may be removed by a club, but the club must not be laid with more than its own weight upon the ground. The lines of the putt must not be touched, except with the club immediately in front of the ball, in the act of addressing it, or as above authorized. The penalty for a breach of this rule is loss of the hole in match play, or of two strokes in medal play.

The "line of the putt" does not extend beyond the holes.

The "player or his caddie" shall include his partner or his partner's caddie.



## RULE XX

When the ball is on the putting-green, no mark shall be placed, nor line drawn, as a guide. The line of the putt may be pointed out by the player's caddie, his partner or his partner's caddie, but the person so doing must not touch the ground.

The player's caddie, his partner or his partner's caddie may stand at the hole, but no player or caddie shall endeavor, by moving or otherwise, to influence the action of the wind upon the ball.

The penalty for a breach of this rule is loss of the hole in match play, or of two strokes in medal play.

## RULE XXI

When on the putting-green, a player shall not play until the opponent's ball is at rest, under penalty of one stroke in either match or medal play.

## RULE XXII

Either side is entitled to have the flagstick removed when approaching a hole. If the ball rest against the flagstick when in the hole, the player shall be entitled to remove the stick, and if the ball fall in, it shall be considered as having been holed out at the last stroke. If the player's ball knock in the opponent's ball, the latter shall be deemed as having been holed out at the last stroke. If the player's ball move the opponent's ball, the opponent, if he choose, may replace it, but this must be done before another stroke is played. If the player's ball stop on the spot formerly occupied by the opponent's ball, and the opponent declare his intention to replace, the player shall first play another stroke, after which the opponent shall replace and play his ball. If the opponent's ball lie on the edge of the hole, the player, after holing out, may knock it away and claim the hole, if holing at the like, and the half, if holing at the odd; provided the player's ball does not strike the opponent's ball and set it in motion. If after the player's ball is in the hole, the player neglect to knock away the opponent's ball, and it fall in also, the opponent shall be deemed to have holed out at his last stroke.

*Penalty, if the player's ball knock in the other ball:* In match play, the latter shall be counted as holed out at the last stroke; in medal play, the latter must be replaced or its owner disqualified.

*Penalty, if a player's ball displace the other ball:* In match play, the other ball may be replaced at its owner's option, but this must be done before another stroke is played; in medal play, the other ball must be replaced or its owner disqualified.

## RULE XXIII

If a ball in motion is stopped or deflected by any agency outside of the match, or by the forecaddie, the ball must be played from where it lies, and the occurrence submitted to as a "rub of the green." If a ball lodge in anything moving, a ball shall be dropped as near as possible to the place where the object was when the ball lodged in it, without penalty. If a ball at rest be displaced by any agency outside the match, excepting wind, the player shall drop a ball as near as possible to the place where it lay, without penalty. On the putting-green the ball shall be replaced by hand, without penalty. If a ball at rest be displaced in match play, it must be dropped, or if on the putting-green, replaced, as near as possible to where it lay, or the hole shall be lost; in medal play, it must be replaced as near as possible to where it lay, or its owner must be disqualified.



## RULE XXIV

If the player's ball strike or be moved by an opponent; or an opponent's caddie or club, the opponent shall lose the hole in match play, but in medal play, there shall be no penalty.

If the player's ball strike the other competitor, or his caddie or club, it is a "rub of the green," and the ball shall be played from where it lies. If a player's ball at rest be moved by the other competitor or his caddie, the ball must be replaced or the player disqualified.

## RULE XXV

If the player's ball strike, or be stopped by, himself or his partner or either of their caddies or clubs, his side shall lose the hole in match play, or one stroke in medal play.

## RULE XXVI

If the player, when making a stroke, strike the ball twice, the penalty shall be one stroke, in either match or medal play.

## RULE XXVII

If the player, when not intending to make a stroke, or his partner, or either of their caddies, move his or their ball, or by touching anything cause it to move when it is in play, the penalty shall be one stroke. If the ball move after the player has grounded his club in the act of addressing it, or, when in a hazard, if he has taken up his stand to play it, he shall be deemed to have caused it to move, and shall lose a stroke, which shall be counted as a stroke of the player, except as provided in Rule 3.

The penalty for moving a ball or causing it to be moved as under Rules 10 and 17, shall be one stroke, in either match or medal play.

## RULE XXVIII

If a player play the opponent's ball, his side shall lose the hole in match play, but not in medal play, unless (1) the opponent then play the player's ball, whereby the penalty is canceled, and the hole must be played out with the balls thus exchanged, or (2) the mistake occur through wrong information given by the opponent or his caddie, in which case there shall be no penalty, but the mistake, if discovered before the opponent has played, must be rectified by placing a ball as near as possible to the place where the opponent's ball lay.

If it be discovered, before either side has struck off from the next teeing ground (or after playing the last hole in the match, before any of the players have left the green) that one side has played out the hole with the ball of a party not engaged in the match, that side shall lose the hole, in match play; or in medal play the player must go back and play his own ball, or, not finding it, must return as near as possible to the spot where it was last struck, tee another ball, and lose a stroke (Rule 6, Medal Play) or else be disqualified.

## RULE XXIX

If a ball be lost, except as otherwise provided in Rules 15 and 23, the player's side shall lose the hole. If both balls be lost, the hole shall be considered halved, in match play; or in medal play the competitor must return as near as possible to the spot from which the lost ball was struck, tee the ball and lose a stroke.

## RULE XXX

If a ball be lost in fog, bent whins, long grass, or the like, only so much thereof shall be touched as will enable the player to find his ball. The penalty for a breach of this rule shall be the loss of the hole, in match play, or of two strokes in medal play.

## RULE XXXI

If a ball be driven out of bounds, a ball shall be dropped at the spot from which the stroke was played, under penalty of loss of the distance, in either match or medal play.

## RULE XXXII

In a three-ball match, if a player consider that an opponent's ball on the playing green might interfere with his stroke, he may require the opponent either to lift or to hole out his ball at the opponent's discretion.

If an opponent consider (1) that his own ball, if left, might be of assistance to the player, he is entitled to lift it, or to hole it out at his discretion; or (2) that the ball of the other opponent might be of such assistance, he may require that it be either lifted or holed out at the opponent's discretion.

## RULE XXXIII

A player shall not ask for advice from any one except his own caddie, his partner, or his partner's caddie, nor shall he willingly be otherwise advised in any way whatever, under penalty of the loss of the hole in match play, or of his disqualification in medal play.

## RULE XXXIV

If a ball split into separate pieces, another ball may be put down where the largest portion lies, or if two pieces are apparently of equal size it may be put where either piece lies, at the option of the player. If a ball crack or become unfit for play, the player may change it, on intimating to his opponent his intention to do so. Mud adhering to the ball shall not be considered as making it unfit for play.

## RULE XXXV

If a dispute arise on any point, the players have the right of determining the party or parties to whom it shall be referred, but should they not agree, either side may refer it to the Committee on the Rules of Golf, whose decision shall be final. If the point in dispute be not covered by the rules of Golf, the arbiters must decide it by equity. Such decision shall finally be referred to the Committee of the United States Golf Association.

## SPECIAL RULES FOR STROKE COMPETITIONS

## RULE I

IN STROKE competitions, the competitor who holes the stipulated course in the fewest strokes shall be the winner.

## RULE II

If the lowest score be made by two or more competitors, the tie or ties shall be decided by another round, to be played on the same day. But if the green committee determine that to be inexpedient or impossible, they shall then appoint the following or some subsequent day, whereon the tie or ties shall be decided, except that By-laws 15 and 19 of the United States Golf Association provide that, in case of ties for the sixteenth place in the amateur championship medal rounds, or for the eighth place in the woman's championship medal rounds, respectively, the contestants so tied shall continue to play until one or the other shall have gained a lead by strokes, the hole or holes to be played out.



## RULE III

New holes shall be made for stroke competitions, and thereafter no competitor, before starting, shall play any stroke on a putting-green, under penalty of disqualification.

Competitors must always assume that new holes have been made. Practice strokes may be played through the green and in the hazards.

In match-play competitions, other than bogey competitions, practice strokes may be played on the putting-green.

## RULE IV

The scores shall be kept by a special marker, or by the competitors noting each other's scores. The scores marked shall be checked after each hole. On completion of the round, the score of the competitor shall be signed by the marker, countersigned by the competitor, and handed to the secretary or his deputy, after which, unless it be found that a card returned shows a score below that actually played (in which case the competitor shall be disqualified), no correction or alteration can be made.

## RULE V

If a competitor play from outside the limit of the teeing ground, the penalty shall be disqualification.

## RULE VI

If a ball be lost (except as otherwise provided in Rules 15 and 31 of Golf) the competitor shall return as near as possible to the spot from which the lost ball was struck, tee a ball and lose a stroke. The lost ball shall continue in play, if it be found before the player has struck another ball. Penalty for breach of this rule shall be disqualification.

## RULE VII

If a competitor's ball strike himself, his clubs or caddie, the penalty shall be one stroke.

## RULE VIII

If a competitor's ball strike another competitor, or his clubs or caddie, it is a "rub of the green," and the ball shall be played from where it lies. If the competitor's ball, which is at rest, be moved by another competitor, or by his caddie or his club, or his ball, or by any outside agency except the wind, it shall be replaced as near as possible to the place where it lay, without penalty.

## RULE IX

A competitor shall hole out with his own ball at every hole, under penalty of disqualification. But if it be discovered, before he has struck off from the next teeing ground, or if the mistake occur at the last hole, before he has handed his card to the secretary or his deputy, that he has not holed out with his own ball, he shall be at liberty to return and hole out with his own ball, without penalty.

If he fail to find his own ball, he shall return as near as possible to the spot from which he last struck it, tee a ball and lose a stroke. (Medal, Rule 5.)

## RULE X

A ball may be lifted out of a difficulty of any description, and teed, if possible, behind it, under penalty of two strokes. If it be impossible to tee the ball behind the difficulty, it shall be teed as near as possible to the place where it lay, but not nearer to the hole.

## RULE XI

All balls shall be holed out, under penalty of disqualification. When a competitor's ball is within twenty yards of the hole, the competitor shall not play until the flag has been removed, under penalty of one stroke. If a ball nearer the hole might either interfere with the competitor's stroke, or in any way assist the competitor, such ball must be holed out or lifted, at the other's option. Through the putting green, a competitor may have any other competitor's ball lifted, if he find that it interferes with his stroke.

## RULE XII

A competitor, unless especially authorized by the green committee, shall not play with a professional, and he may not willingly receive advice from any one but his caddie, in any way whatever, under penalty of disqualification.

A forecaddie may be employed by any competitor or by each.

## RULE XIII

Competitors shall not discontinue play on account of bad weather, under penalty of disqualification.

## RULE XIV

Where, in the "Rules of Golf," the penalty of the breach of any rule is the loss of the hole, in stroke competitions the penalty shall be the loss of two strokes, except as otherwise provided in these special rules.

## RULE XV

Any dispute regarding the play shall be determined by the rules of the Golf committee.

## RULE XVI

The rules of Golf, so far as they are not at variance with these special rules, shall apply to stroke competition.



## ETIQUETTE OF GOLF

The "Etiquette of Golf" shall be as binding on players as are the other rules of the game.

1. A single player has no standing and must always give way to a properly constituted match.

2. No player, caddie, or onlooker should move or talk during a stroke.

3. No player should play from the tee until the party in front has played his second stroke and is out of range, nor play up to the "putting-green" until the party in front has holed out and moved away.

4. The player who has the honor should be allowed to play before his opponent tees his ball.

5. Players who have holed out should not try their putt over again when other players are following them.

6. Players looking for a lost ball must allow other matches that come up to pass them.

7. On request being made, a three-ball match must allow a single, threesome or foursome to pass. Any match playing a whole round may claim the right to pass a match playing a shorter round.



8. If a match fail to keep its place on the green, and lose in distance more than one clear hole on those in front, it may be passed on request being made.
9. Turf cut or displaced by a stroke should at once be replaced.
10. A player should carefully fill up all holes made by himself in a bunker.
11. It is the duty of an umpire or referee to take cognizance of any breach of rule that he may observe, whether he be appealed to on the point or not.

## GOLF-CROQUET

GOLF-CROQUET combines several of the principles of each of the two games after which it is named—golf and croquet. It was invented as a substitute for golf, and was intended to remedy one of the principal drawbacks of that game, namely, the large amount of space required for the links. Golf-croquet permits the use of many of the favorite strokes of golf, while at the same time it can be played on a lawn of moderate size.

The game is played with wooden balls, which are two and three-fourths inches in diameter, and made light and tough so as to secure force and speed without much momentum. Each player is provided with one ball and a mallet; the latter differs from an ordinary croquet mallet in having a larger handle, and a head which is beveled at one end so that it may be used to lift the ball clear of the ground.

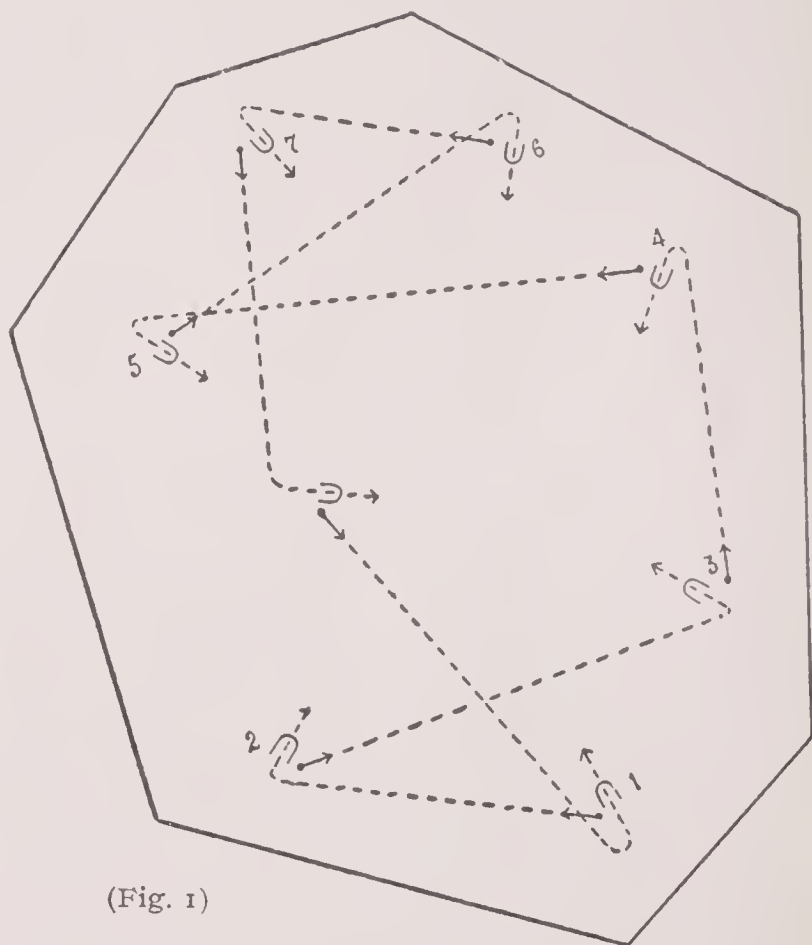
The course, or field, of play, for Golf-croquet (Fig. I) may be laid out on a comparatively smooth lawn or field, either turf or bare ground, and of any shape or size. This course is marked with wickets or arches, similar to those used in croquet. Eight of these wickets are generally used, but if the course is small, a less number may be placed, as is the case with the holes in golf, and the player may go over the course twice during a game. The ground for a space of a few yards around each wicket should be made level and smooth. A spot is first marked near the center, since all shots made through the wickets must be made toward the center. The distances of the wickets from the center and from each other should vary, and the more unsymmetrical their arrangement, the more difficult and interesting the game will be. Near each wicket is placed a flag, on which the number of the wicket is plainly marked. The wickets should not be numbered in the order in which they are arranged on the field, but should be placed so that each number is in plain view from the number next below it; that is, wicket No. 6 must be visible from No. 5; No. 5 from No. 4. etc.



The game is usually played either by two persons or by four, and there are two methods of play, which are called "All wickets" and "All strokes." In the "All wickets" game, each player drives his ball through the wickets in their numerical order, and the one making a wicket in the least number of strokes scores 1. If each takes the same number of strokes in making a wicket, there is no score for that wicket. The player winning the greater number of wickets wins the game. In the "All strokes" game the players go through the wickets in their order, as before, and when the entire course has been played, the player who has taken the least number of strokes in making all the wickets wins the game.

Let us suppose that there are two players, A and B: A starts by placing his ball in some place previously selected for the start, and after carefully estimating the distance to the first wicket, strikes the ball and endeavors to send it as near as possible to that wicket. This counts as stroke 1 for A. B now goes to the starting place, and, in the same manner, plays his ball toward the first wicket. Each player goes to where his ball is, and the one farthest away from the wicket played for plays stroke 2. If after this stroke his ball is still farther away from the wicket than that of his opponent, he plays stroke 3. If, however, stroke 2 carries him closer to the wicket than his opponent, the latter plays his second stroke before the former plays his third. The play is continued in this manner until both players get through the wicket, and a record is made of the number of strokes made by each. If a player strikes, with his ball, the ball of his opponent, that stroke is free and is not counted. He may then either replace the other ball where it lay when struck, or leave it in the position to which he has driven it; and he may play his ball from where it lies, or from any point within the radius of a mallet head from the ball struck. After the first wicket, the others are made in a similar manner, the play toward the next wicket being started by each player from a point within a radius of six feet from the wicket just made.

In case there are four players, two play as partners, as in golf, both using the same ball, and taking alternate strokes. A record should be kept, both of the number of strokes required for each player for each wicket, and of the aggregate number of strokes made by each.



(Fig. 1)



The player winning the majority of wickets wins the "All wickets" game, and the one having the least aggregate number of strokes wins the "All strokes" game. As in golf, a player may win either game without winning the other. On account of its simplicity, freedom from expense, and similarity to golf, without several of the drawbacks of that game, Golf-croquet has become deservedly popular, and promises to become especially well known as a "home game."

Although considerable latitude is allowed in the rules of play, the following are generally observed:—

#### RULES OF GOLF-CROQUET

1. Some spot must be selected as the *center* of the lawn (or ground) to be used, and must be plainly marked.

2. Place the wickets so that they face the center of the lawn. All strokes through the wickets are made toward the center.

3. In placing the wickets, it is necessary that the next wicket in sequence be plainly in sight, and that it be indicated by a flag, if the distance be great.

4. In beginning the game, the players strike alternately, and when each has played, the one whose ball is farthest away, or is out of position for going through the wicket, continues the play.

5. In counting total strokes, and not wickets, the least total wins the game. This is the ordinary game, called "All strokes."

6. The game by wickets is played by competing in the number of strokes required for each wicket until one or the other passes the wicket, when a fresh start is made for the next wicket. Even strokes at any wicket serve to halve it, as in golf. This is called the "All wickets" game.

7. If the player's ball strikes another ball, the stroke is considered "free"; that is, it is not counted in his score, and he plays again at once. His ball may be played either from where it lies or from a point within the length of a mallet-head from the ball that was struck.

8. When a ball is struck by another, it may be replaced or left where knocked, at the option of the owner, who must decide at once. (See second sentence of Rule 7.)

9. Count must be made of the number of strokes necessary to "make," or go through, each wicket, unless playing under Rule 6.

10. Should the ball become entrapped in a hole or puddle, where it is impossible to handle it with a mallet, it may be lifted out; the player then stands with his back to the center and throws the ball over his shoulder, and adds two strokes to his score.

11. If a ball go out of bounds or into a hedge, it may be thrown by hand toward the center, but two strokes must be added to the player's score.

12. All strokes count, whether the player hit the ball or miss it.

13. If, *on the drive from any wicket*, a player should split the ball so badly as to render it erratic in flight, he may start over, with a new ball, from the wicket last passed.

14. Rule XIII refers to the *first* stroke *from* a wicket; if, however, the ball be split on a subsequent stroke, he must continue to play that ball (or the larger portion of it) until he pass his next wicket, when he may take a new ball.

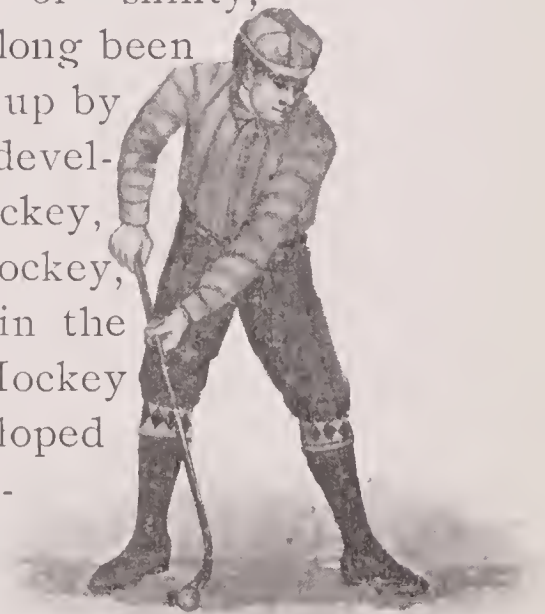
15. The first stroke from each wicket is taken from any point within the radius of six feet from that wicket. This rule is *general*, whether playing "All strokes" or "All wickets."

16. When there are four players, each pair uses one ball, and they play alternately. If there are three players, each takes a ball, and the play is competitive for each wicket.

17. The favorite handicap with three players is for the best player to beat both the others; that is, if either player of the two wins a wicket he wins it for both. This is like the "best ball" game in Golf.

## LAWN HOCKEY

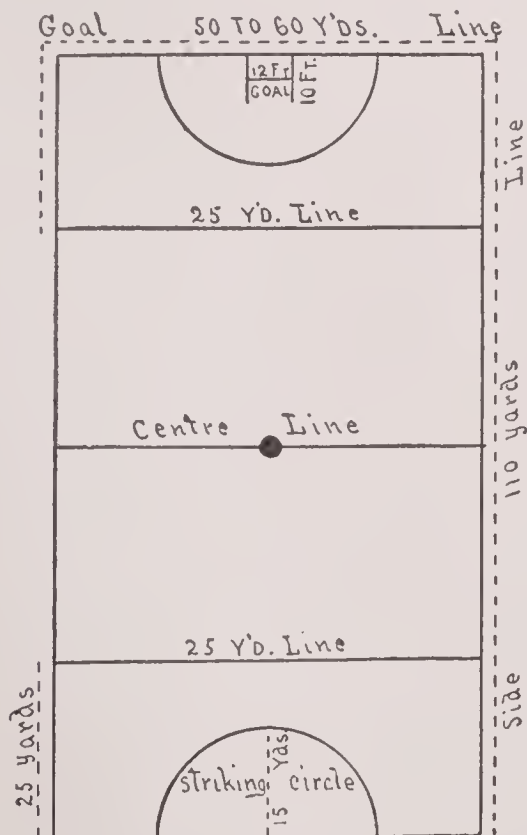
THE game of Lawn Hockey, or Hockey, as it is usually called, has been played in one form or another for many years, especially in America, England, Ireland and Scotland. The style of game with which Americans are most familiar is called "shinny" or "shinty," which is the Scotch name for Hockey. This game has long been popular, especially among schoolboys, and as it was taken up by older players, it was gradually changed until it finally developed into the present scientific game of Hockey. Ice Hockey, ice polo and roller polo are similar in principle to Lawn Hockey, though there are several important points of difference in the rules of these four games. In its present form, Lawn Hockey very closely resembles ice hockey, which was developed from it, and in describing the former game it will be necessary to mention only the points in which it differs from



ice hockey, which is more generally known in this country than the lawn game.

### THE FIELD

The field of play for American Lawn Hockey is shaped as in the accompanying diagram. Its length should be one hundred and ten yards, and its width between fifty and sixty yards. The lines of the field are usually marked with lime, in the same manner as those of a tennis court. The exact center of the field is plainly marked, and a center line passes through that point parallel to the end, or goal, lines. At a distance of twenty-five yards from the goals, lines are marked across the field, parallel to the goal lines.

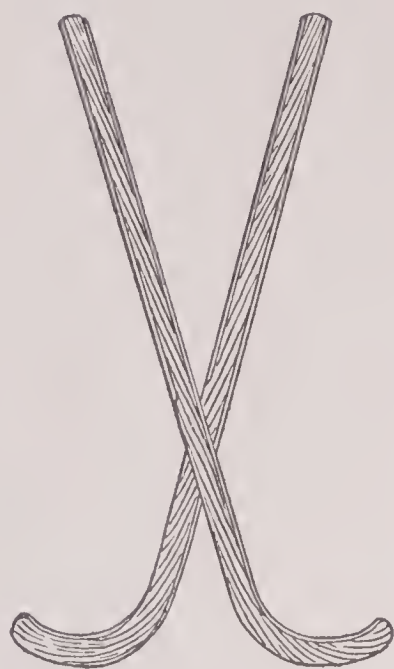


(Fig. 1)

From the center of each goal line, a semicircle with a radius of fifteen yards is marked, and the space between this arc and the goal



line is called the *striking circle*. The goals, which are placed in the middle of the goal lines, consist of two upright posts twelve feet apart, with a cross-bar between them ten feet from the ground. Instead of the puck used in ice hockey, an ordinary wooden cricket ball is used in the lawn game. Hockey sticks, too, differ from those used in ice hockey. (Fig. II.) Instead of having a long, straight blade, they



(Fig. 2)

are curved at the lower end, so that they may be passed through a circle two inches in diameter, and they may not be more than one inch in thickness in any direction.

In the game of shinny, with which most American boys are familiar, the number of players is unlimited, and, except in match games, this rule is sometimes observed in Hockey. In the regulation match games, eleven players are required, unless this number be changed by mutual agreement of the captains. A team of eleven men is composed of three *advance forwards*, four *forwards*, two *advance guards*, one *guard*, and one *goal-tend*. If there are less than eleven men, such of these positions are left vacant as the respective captains may think best.

## THE GAME

At the beginning of each game, and after each goal, the ball is put in play by a "bully," which corresponds to the "face" in ice hockey. The ball is placed in the center of the field, and two of the forwards, one from each team, stand near the center line, facing the ball from opposite sides, and with their backs to the opposite side lines. When the referee calls "Play!" each of these men strikes the ground on the side of the ball nearest his own goal and the stick of his opponent over the ball, alternately, three times. Either player may then strike the ball, and the moment it is touched it is in play. During the bully, the players of each team must be "on side," that is, must be between the ball and their goal. The positions of the players when the ball is bullied are similar to those of the players in ice hockey when the puck is faced, but these positions are varied according to the judgment of the different captains. As soon as the ball is put in play, the advance forwards hurry across the center line into their opponents' territory; the forwards and advance guards, by a series of diagonal passes, advance the ball past their opponents and endeavor to get it to the advance forwards, who should be inside or near the striking circle. This circle is the only place from which a

goal may be made, and in this rule we have one of the most important differences between Lawn Hockey and Ice Hockey, since in the latter game a goal may be made from any part of the rink.

When the advance forwards are in possession of the ball, the forwards assist them in attempting to pass it through the goal. The advance guards keep a few paces behind the line of scrimmage, toward the center of the field, so as to return the ball in case their opponents drive it back from the goal. The guard, as his name indicates, defends his goal from attack, and he never advances beyond the center of the field. The goal-tend never leaves his position between the goal posts, and when the ball is driven to him he either strikes or kicks it to one side, so as to prevent its passage between the goal posts. He is the only player that is allowed to advance the ball otherwise than with his stick, though, as in Ice Hockey, any player is permitted to stop the ball, either with his stick or with any part of his body.

The defense players make every effort to keep the ball from the front of their goal, especially when it is within the striking circle. If the ball is passed between the goal posts, and below the crossbar, one point is scored for the side making the goal. The ball is then returned to the center of the field, and after a bully the game is resumed, and proceeds as before. When the teams are evenly matched, the ball is often first in one striking circle, then in the other, several times before a goal is scored. The game usually consists of two thirty-five-minute halves, with an intermission of ten minutes between, though the length of the halves may be changed by agreement of the captains of the opposing teams.

The rule for off-side play is similar to that in Ice Hockey, except that a player is off side if he is ahead of the ball when it is hit by another player of his team, unless there are at least three of his opponents nearer their goal line than he, himself, is. No player is allowed to advance the ball with the back of his stick, nor is he allowed to raise his stick above his shoulders when striking. The stroke must always be from right to left. Hooking sticks are allowable, if the player is within striking distance of the ball. In this way he may prevent a favorable stroke of an opponent by hooking the latter's stick, and may thus give one of his own side an opportunity to get the ball.

A free hit is given to the opposite side if any player transgresses the rules in one of the following points: (1) Raises stick above shoulders during stroke; (2) kicks ball (except goal-tend); (3) is off side; (4) plays with back of stick; (5) strikes ball otherwise than from right to left; (6) strikes, pushes, trips, or otherwise plays with



unnecessary roughness; (7) fouls; *i. e.*, passes in front of a player from left to right when the latter is about to strike the ball. When a free hit is given, no player of the offending side may be within five yards of the ball, and the striker must not touch the ball again until it has been touched by another player.

If any player is guilty of one of the foregoing transgressions of the rules, except Nos. 1 and 5, within the striking circle, a "penalty bully" is given the opposing team. In this case all players except the offender and one of the other side must be outside the striking circle, and the two players bully as at the center, except that no other player may interfere until after a goal has been scored or the ball passes outside the striking circle. In the latter event, the ball is in play, and the game goes on as before. If a player transgress Rule 1 or Rule 5 within the striking circle, an ordinary bully is played at the spot where the transgression occurred.

If the ball passes the side line during any part of the game, it is rolled, not thrown, back on the field by one of the opposite side, from the spot where it crossed the line to the side of the player who last touched it. It may be rolled in any direction, except toward the goal of the player to whom it is rolled. The player who rolls the ball in may not touch it again until it has been touched by another player. If the ball is driven across the goal line outside the goal by one of the defending players, a free hit is given one of the attacking side from the corner where the side and goal lines meet. During this hit, all of the defending side must be back of the goal line, and all of the attacking side must be outside of the striking circle. If the ball is driven over the goal line outside the goal, by one of the attacking side, it is bullied at a point on the twenty-five yard line, at right angles to the spot where it crossed the goal line.

## RULES OF LAWN HOCKEY

Following are the rules for American Lawn Hockey, as played at the present time:—

### RULE I

#### THE GROUNDS

SECTION 1. The grounds shall be one hundred and ten yards long and not more than sixty, nor less than fifty, yards wide. They shall be inclosed by heavy white lines marked with lime upon the ground. The longer sides shall be called the *side lines*; the shorter, the *goal lines*.

SEC. 2. *Striking Circle*—From the center of each goal line an arc of a circle shall be drawn, with a radius of fifteen yards. The space included between this arc and the goal shall be called the *striking circle*.

SEC. 3. The field of play shall be divided into two equal parts by a lime line parallel to the goal lines. Lime lines shall also be drawn twenty-five yards from the goal lines and parallel to them.

## RULE II

## THE GOALS

The center of the goal shall be in the center of the goal line. The goal shall consist of two upright posts twelve feet apart, with a crossbar ten feet from the ground.

## RULE III

## THE BALL

The ball shall be an ordinary cricket ball.

## RULE IV

## THE STICKS

The sticks must be shaped so as to pass through a ring two inches in diameter. They shall not be more than one inch in thickness. They shall be of wood, without metal fittings or sharp edges.

## RULE V

## THE CLOTHING

The players shall not wear metal spikes in their shoes, or any other hard substance which, in the judgment of the referee, would injure another player.

## RULE VI

## THE PLAYERS

The game shall be played by two teams of eleven men each. The players shall be called *advance forwards*, *forwards*, *advance guards*, *guard*, and *goal-tend*. The captain may change the number of players, by mutual agreement with the captain of the opposing team.

## RULE VII

## THE OFFICIALS

The officials shall be a referee and two umpires.

## RULE VIII

## DUTIES OF THE REFEREE

(a) He shall put the ball in play at the beginning of the game, and whenever time has been called. He shall see that the grounds, ball, sticks, and clothing are according to regulations. He shall have the power, after warning, to suspend a player because of rough play.

(b) He shall act as timekeeper, and shall notify the captains, not less than five, nor more than ten, minutes before the close of each half, how many minutes of play remain.

(c) He shall decide all points not definitely covered in these rules, but shall have no power to change decisions under the jurisdiction of other officials. The referee shall suspend the game immediately if a player is incapacitated. No delay shall continue for more than two minutes. When play is resumed, the ball shall be bullied from the spot where it was when time was called.

## RULE IX

## DUTIES OF THE UMPIRE

The umpires shall each judge independently. Each shall assume responsibility for one side and one goal line, and for half of the field of play. They shall, however, judge on sticks over the entire field, as divided in Rule I, Section 3. Each shall



be judge of the position, progress, and ownership of the ball in his half of the field. The umpires are responsible for the calling of all fouls and the enforcement of all penalties for violation of rules.

## RULE X

### THE GAME

SECTION 1. The choice of goals shall be tossed for by the captains at the beginning of the game. Each half of the game shall occupy thirty-five minutes, and ten minutes intermission shall be allowed between the halves. The teams shall change goals at the beginning of the second half. The game shall start by a bully (Rule 10, Sec. 6, *c* and *d*) from the middle of the field, with all players on their own side of the ball.

SEC. 2. A goal is scored when the ball passes between the goal posts, beneath the cross-bar, and entirely over the goal line, provided the ball has been struck by or glanced from the stick of a player, or the person of a defender, while within the striking circle.

SEC. 3. (*a*) The ball may be stopped with the hand or any portion of the body, but it must not be held, picked up, carried, kicked, or driven forward or back, except with the front of the stick, and then only from the ground or from a point below the knee.

(*b*) Charging, tripping, kicking, collaring, or shinning shall not be allowed. A player shall not go between the ball and his opponent so as to obstruct him, nor cross him from the left so as to foul him. If the player cross and touch the ball before touching his opponent, no foul shall be called.

(*c*) The goal keeper, except in a penalty bully (Rule 10, Sec. 6, *e*) may kick the ball while within the striking circle. He shall be named by his captain at the beginning of the game. The goal keeper shall not be changed until players and officials have been duly notified.

SEC. 4. *Off side*—A player is off side if he is ahead of the ball when it is hit by another player of his team, unless there be at least three of his opponents nearer their own goal line than himself. This rule shall not apply in the striking circle, provided the man was on side when the ball entered the striking circle. He shall not play the ball nor approach within five yards, nor in any way interfere with any other player, until the ball has been touched or hit by an opponent.

SEC. 5. *Sticks*—In striking with the sticks, all strokes must be from right to left. The stick must not rise above the shoulder during any portion of the stroke. Participation in the game is allowable only when the player has his stick in hand. In a free hit, intentional undercutting, or raising the ball above the hips, is not allowable. Fencing, or hooking sticks, is allowable only when the opponent is within striking distance of the ball. Hooking an opponent is not allowable. The back of the stick shall not be used for stopping or striking the ball. (The back of the stick consists of the outer edge and right-hand surface while held in striking position.)

SEC. 6. The bully and penalty bully are methods of putting the ball in play, either at the beginning of the game, after time has been called, or after a foul. The bully is played as follows:—

(*a*) All players must be on their own side of the ball, that is, between their own goal and the ball.

(*b*) All players, except the man from each side acting as bully, must be at least five yards from the ball until it has been hit.

(c) Each player shall strike the ground on his own side of the ball and his opponent's stick three times alternately. The ball shall then be in play for these two men. After it has been hit by one of these men, it shall then be in play for all.

(d) The two bullies shall stand facing the side lines, each in a position to strike toward his opponent's goal.

(e) The penalty bully is given only for violation of Section 3 of this rule, made by the defending side within their striking circle, this penalty bully to be between the offender and one player selected by the other side. All other players shall be outside the striking circle. These two men shall play the ball, without aid or hindrance from the other players, until a goal has been scored, or the ball has been batted outside the striking circle, when it shall be in play for all. Violation of this section shall give a free hit to the offended side from the spot where the ball was when the foul occurred. All bullies from violation of rules shall take place on the spot where the violation occurs.

SEC. 7. A free hit is given for all fouls except those made by the defending side within their circle, when a bully shall be given, except for violation of Section 3 of this rule, for which a penalty bully shall be given. When a free hit is made, all members of the offending side shall be at least five yards away.

SEC. 8. *Playing in from out of bounds*—When the ball passes over the side lines, it shall be rolled in at right angles to side line or toward goal of player rolling in. It shall be rolled in from the point where it crossed the side line by one of the opposite side to that of the player who last touched it. All players shall stand not less than five yards from the player rolling in the ball. The player rolling in the ball must be out of bounds, and shall not again touch the ball until it has been touched or hit by some other player.

When the ball is hit over the goal line, without scoring a goal by the attacking side, it must be brought out into the field of play twenty-five yards, in a direction at right angles to the goal line, from the point where it crossed such line, and there "bullied."

If the ball glance off or be hit behind the goal line by one of the defending side, the attacking side shall have a free hit from within one yard of the nearest corner flag. At the time of such free hit, all defenders must be behind their own goal line, and all of the attacking side must be outside the striking circle. The attacking side cannot score a goal from such free hit until the ball has been touched or hit by the defenders, or has been brought to a full stop on the ground by the attacking side.

## PONY POLO

THE game of Pony Polo, as its name indicates, is played on horse-back, but in the object sought by the players, and in some other particulars, it closely resembles lawn hockey. The origin of Pony Polo antedates the Christian era, but it did not become known in England until 1870, and its introduction into this country is of very recent date. Owing to the fact that each player is required to have at least one pony of a specified size, thus necessitating a considerable expense, the game could never become popular in schools and col-



leges, but is played principally by clubs organized from among the wealthy residents of large cities.

### GROUND—BALL—STICKS

A full-sized Polo ground is three hundred yards long by two hundred yards wide, but the game is often played on a much smaller field. A rectangular shape is usually selected, though many players prefer to have the corners rounded. The playing space should be perfectly level, and though a slight rise from each end to the center is not considered a detriment, there must be no slope from the center to the sides. The field should be covered with a firm turf of closely cut lawn-grass, which should be kept smooth by rolling. The boundaries may be marked by white lines, similar to those of a tennis court, but boards are generally used for marking the side lines. These boards are about ten inches wide and are nailed to upright wooden pegs, which are driven into the ground at intervals. The turf inside the field is sloped up to the sideboards so that the ball may not lodge against them. Lines are also drawn across the ground thirty yards from the ends, and parallel to them, and the center of the field is marked by a white spot.



A goal is placed at either end of the ground, in the center of the back line. The goal posts, which should not be so heavy as to make a collision with them dangerous, are eight yards apart and ten feet high, and are usually surmounted by small flags.

The regulation ball is of willow or alder wood, three inches in diameter, and is painted white. Polo sticks have handles of ratan or malacca, which vary in length from four feet two inches to four feet six inches, and heads made of sycamore, which are usually from seven and one-half to eight and one-quarter inches long, one and seven-eighths to two and one-fourth inches wide, and one and one-eighth to two inches thick. The handle is largest at the grip, and tapers downward, so that it is not likely to slip from the player's grasp.

Each side has four players, who are distinguished by shirts, jerseys, or waistcoats, of different colors. Their dress, of course, varies in different clubs, but a padded cap, or pith helmet, is nearly always worn to prevent serious injury to the head. The players are mounted on light, active ponies, which must not be more than fourteen hands two inches in height.

### THE GAME

In beginning the game, each side takes a position facing its opponents, in the center of the field. Three of the men of each team

are in line, and the fourth is slightly in rear of the others. Two umpires are selected that are satisfactory to the captains of both teams, and they take positions on opposite sides of the ground. The secretary or polo manager, or some one selected by him, then throws the ball in between the line of players and cries "Play!"

The object of each side is to score a goal by driving the ball between its opponent's goal posts, or above their top, but not outside their imaginary continuation line. Whenever a goal is scored the sides change goals, and the ball is carried to the center of the field and put in play as at first. The side scoring the most goals wins the game. In a match the time of actual play is divided into three periods of twenty minutes each, with an interval of five minutes between each two successive periods.

If a ball be hit behind the back line by one of the opposite side, it must be hit out by one of the side whose line it is, from a point as near as possible to where it crossed the line. None of the attacking side may be within thirty yards of the back line when the ball is hit out. If, however, the ball be hit behind the back line by one of the players whose line it is, one of that side must hit it out from the center of the goal line between the posts, and all of the defenders must be behind the line until the ball is hit out, while their opponents may place themselves where they choose, but not within fifteen yards of the ball. When the ball is hit out of bounds over one of the side lines, it is thrown in by the umpire from the exact point where it crossed the boundary line, in a direction parallel to the goal lines, and between the opposing ranks of players.

Subject to certain restrictions, which are defined by the appended rules of the game, a player may interpose his pony before an antagonist to prevent him from reaching the ball, or may hold his adversary's stick by interlocking, or "crooking," his own stick with it, and thus prevent him from hitting the ball. The rule regarding off-side play is similar to the one that obtains in hockey, and no player who is off-side is allowed to hit the ball or to interfere with any player of the opposite side. Penalties for fouls are very severe, and may consist in giving a free hit to the side against which the offense was committed, or in permitting them to rule out of the game any player of the offending side, in which event the game is continued with three players on each side. If a player drop his stick he must pick it up himself, and no dismounted player is allowed to hit the ball.

Ponies may be changed at any time during the game, but this is at the player's risk, unless done at the expiration of ten minutes from





the beginning of one of the periods of play, when the game is suspended for two minutes in order to permit changes to be made.

Should a player's stick be broken, he must ride to the place where sticks are kept and get another, and on no account is a stick to be brought to him.

Following are the most important rules of Pony Polo :—

#### RULES

1. *Ponies*—The height of ponies shall not exceed fourteen hands two inches, and no pony shall be played in either practice games or matches, unless he has been registered in accordance with the by-laws. No vicious pony shall be allowed in the game.

2. *Ground*—A full-sized ground shall be three hundred yards long by two hundred yards wide. The goals shall be not less than two hundred and fifty yards apart, and each goal shall be eight yards wide.

3. *Balls*—The balls used in Pony Polo shall be of wood, and three inches in diameter.

4. *Officials*—Each side shall appoint an umpire, unless it be mutually agreed to play with one instead of two, and his or their decisions shall be final. In important matches, a referee may be appointed in addition to the umpires, in which case his decision shall be final. An official timekeeper shall be appointed in all important matches.

5. *Number of Players*—In all matches for cups or prizes, the number of players on each side shall be limited to four.

6. *Beginning the Game*—In beginning the game, the two teams take up their positions on opposite sides of the center of the field of play, and the manager or his representative throws the ball in between them.

7. *Duration of Play*—The duration of actual play in a match shall be one hour, which shall be divided into three periods of twenty minutes each, and there shall be an interval of five minutes for rest between each two successive periods. The first two periods of play shall terminate as soon as the ball goes out of play after the expiration of the prescribed time, and any excess of time in either of the first two periods, due to the ball remaining in play, shall be deducted from the succeeding periods. The last period shall terminate immediately at the expiration of the hour's play, even though the game be in progress at that time.

*Exception*—In case of a tie, the last period shall be prolonged till the ball goes out of play, and if there is still a tie, after an interval of five minutes the ball shall be started from where it went out of play, and the game shall be continued as before, until one side obtains a goal, which shall decide the match.

8. *Changing Ponies*—As soon as the ball goes out of play after the expiration of the first ten minutes of each period of play, the game shall be suspended for sufficient time, not exceeding two minutes, to enable players to change ponies. With the above exception, play shall be continuous, and it shall be the duty of the umpire to put the ball in play punctually, and, in the event of unnecessary delay in hitting out the ball, to call upon the offending side to proceed at once.

Any change of ponies, except according to the above provision, shall be at the risk of the player.

A bell shall be rung to signify the time for changing ponies, and at the termination of each period of play.

9. *Goals*—A goal is scored when the ball is driven between the goal posts, clear of the goal line, by any of the players or their ponies. If a ball is hit above the tops

of the goal posts, but, in the opinion of the umpire, passes between their imaginary continuation lines, it shall be deemed a goal. The side that scores the greater number of goals shall be declared winner of the match.

10. *Ball Crosses Back Line*—If the ball be hit behind the back line by one of the opposite side, it shall be hit out by one of the side whose line it is, from a spot as near as possible to where it crossed the line. None of the attacking side shall be within thirty yards of the back line until the ball is hit out. If, however, the ball be hit behind the back line by one of the players whose line it is, they shall hit it off from the center of the goal line between the posts, and all of the defending side shall remain behind the line until the ball is hit out, the attacking side being free to place themselves where they choose, but not within fifteen yards of the ball.

11. *Ball Out of Bounds*—When the ball is hit out of bounds, it must be thrown into the field of play by the umpire from the exact spot where it went out, in a direction parallel to the two goal lines, and between the opposing ranks of players. There must be no delay, whatever, nor any other consideration, for absent players.

12. *Riding Out an Antagonist; Crossing*—A player may "ride out" an antagonist, or interpose his pony before the latter, so as to prevent him from reaching the ball, but he may not "cross" another player in possession of the ball, except at such distance that the said player shall not be compelled to check his pony to avoid a collision.

*Definition of "Crossing"*—If two players are riding from different directions to hit the ball, and a collision appears probable, the player in possession of the ball (that is, he who last hit the ball, or, if neither has hit it, the player who is coming from the direction from which the ball was last hit) shall have the right of way; provided that no player shall be deemed to be in possession of the ball by reason of his being the last striker, if he shall not have pursued the exact course of the ball.

13. *"Crooking" Stick*—No player shall "crook" his adversary's stick unless he is on the same side of the adversary's pony as the ball, or is in a direct line behind.

14. *Off-side*—No player who is off-side shall hit the ball, or shall in any way prevent the opposite side from reaching or hitting it.

*Definition of "Off-side"*—A player is off-side when, at the time the ball is hit, he has no one of the opposite side nearer the adversary's goal line, or that line produced, or behind that line, and he is neither in possession of the ball nor behind one of his own side who is in possession of it. The goal line means the eight-yard line between the goal posts. A player, if off-side, remains off-side until the ball is hit, or hit at, again.

15. *Rough Play*—No player shall seize with the hand, strike, or push with the head, hand, arm, or elbow, but a player may push with the part of his arm above the elbow, provided the elbow be kept close to the side.

16. *Carrying the Ball*—A player may not carry the ball. In the event of the ball lodging upon or against a player or pony, it must immediately be dropped on the ground by the player or the rider of the pony.

17. No player shall intentionally strike his pony with the head of his polo stick.

18. *Penalty for Foul*—Any infringement of rules constitutes a foul. In case of an infringement of Rules 12, 13, 15, 16, or 17, the umpire shall stop the game; and in case of an infringement of Rule 14, the umpire shall stop the game on an appeal by any one of the side which has been fouled. On the game being stopped as





above, the side which has been fouled may claim either of the following penalties:

(a) A free hit from the position of the ball when the foul took place, none of the opposing side to be within ten yards of the ball; or,

(b) The side which caused the foul must take the ball back and hit it out from behind their own goal line.

19. *Penalty for Disabling a Player*—In case a player is disabled by a foul, the side to which that player belongs shall have the right to designate any one of the players on the opposite side, who shall retire from the game. The game shall be continued with three players on each side, and if the side that caused the foul refuse to continue the game, it shall thereby lose the match. This penalty shall be in addition to that provided by Rule 18.

20. *Changing Goals*—The two teams shall exchange goals whenever a goal is scored, or, if no goal has been obtained, at the beginning of the second half of the game.

21. *Damaged Ball Exchanged*—If the ball be damaged, the umpire must at once stop the game, and must throw in a new ball from the place where the first was broken toward the nearest side of the ground, in a direction parallel to the two goal lines and between the opposing ranks of players.

22. *Broken Sticks*—Should a player's stick be broken, he must ride to the place where sticks are kept and take one. On no account is a stick to be brought to him.

23. *Dropped Stick*—In the event of a stick being dropped, the player himself must pick it up. No dismounted player shall be allowed to hit the ball.

24. *Ground Kept Clear*—No persons shall be allowed within the arena except the players, umpires and manager.

25. *Accidents*—If any player or pony fall or be injured by an accident, the umpire may stop the game and may allow time for the injured man or pony to be replaced, but the game need not be stopped should any player fall through his own fault.

On play being resumed, the ball shall be thrown in where it was when the game was stopped, in the manner provided for in Rule 21.

26. *Disregarding Umpire's Decision*—Any deliberate disregard of the injunctions of the umpire shall involve the disqualification of the team so offending.

27. *Umpire's Power to Decide All Disputes*—Should any incident or question arise that is not provided for in these rules, such incident or question shall be decided by the umpire.



## ICE POLO

ICE POLO, as first played, was developed from "shinny," and there was no restriction as to the size of the field of play, the number of players, the size or shape of stick, or the material or shape of the object used for the ball or "puck." Foreigners and others who are not familiar with the game, sometimes erroneously refer to Ice Polo as "American ice hockey," but, except in the object sought by the players, there is little similarity between the two games. The modern game of Ice Polo, however, is almost identical with roller polo, and is played in a correspondingly scientific manner.

## THE GAME

THE field of play, or rink, should be rectangular in shape, and the distance between the goals should not be less than one hundred and fifty feet. The goal posts are four feet apart, and a mark is made on each at a point eighteen inches from the surface of the ice. A goal is made when the ball passes between the goal posts below an imaginary line connecting these marks. Each goal is surrounded by a *goal-tender's circle*, with a radius of two feet from the center of the goal.

The ball used in Ice Polo is the regulation rubber-covered, roller polo ball. The sticks must not exceed four feet in length and one and one-fourth inches in diameter, and may not have any material on them more than one foot from the upper end, or stringing of any kind on any part.

The game is divided into two halves which are usually twenty minutes in length, and the interval between them may not exceed ten minutes. The sides change goals at the end of the first half. Each goal counts three points, and in case of a tie the side that has made the least number of fouls is declared the winner of the game.

Fouls are penalized, as in roller polo, by the deduction of one goal, or three points, from the score of the offending team for every three fouls. A foul is declared if the ball be driven between the goal posts from the rear. In the method of play, duties of the various players, and in other matters not herein especially referred to, Ice Polo is identical with roller polo.

Following are the rules for Ice Polo as adopted by the New England Skating Association:—

## RULES

1. Each team shall consist of five players, who shall be designated as follows: One *goal-tend*, one *half-back*, one *center*, two *rushers*.

2. The distance from goal to goal shall be one hundred and fifty feet. The goal shall be four feet in width.

3. The regulation Spalding Rubber-covered Polo Ball shall be used exclusively.

4. The sticks shall not exceed four feet in length and one and one-fourth inches in diameter. Sticks shall have no material of any kind on them more than one foot from the top. No stringing of any kind is permissible.

5. The referee shall examine the sticks of each player before the game begins.

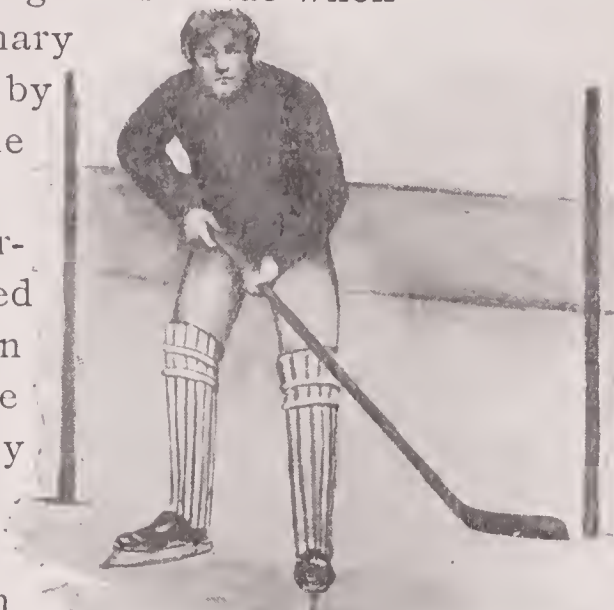
6. Each goal umpire shall make a mark in some way on each goal post, eighteen inches from the ice, so that it may be plainly seen.

7. Time shall be taken out from the moment after a goal is made and the ball is placed in the center, to the moment when the sides are lined up ready to rush.

8. The time between halves shall not exceed ten minutes.

9. After each goal the ball shall be placed in the center.

10. The referee shall place the ball in the center of the field between the two goals, and when both teams are lined up in their respective places, shall give the signal for play to begin.





11. In case of a skate coming off, or a serious accident, the referee shall call "Time!" and shall deduct time accordingly. Time shall not be called because a player drops or otherwise loses control of his stick.

12. No time exceeding five minutes shall be taken out because of a skate coming off or a serious accident.

13. At the end of the first half the sides shall change goals.

14. When time is called owing to loss of a skate or serious injury, each player shall remain exactly where he was at the moment when time was called, and shall not move so that he cannot resume his exact position when the referee calls play.

15. In case of a tie, the contesting teams shall play not to exceed ten minutes until one side makes a goal.

16. Should time be lengthened in the above manner, or in case of a serious accident or a skate coming off, play must be resumed within two minutes.

17. A forfeited game shall count three goals to the side to which the game is forfeited, nothing being allowed the opposite side.

18. For every three fouls which a side makes, one goal shall be deducted.

19. A goal shall be considered as three (3) points.

20. In case of a tie, the side which has made fewest fouls shall be declared the winner.

21. A postponed game or a tie game shall be played off as soon as the weather permits.

22. A goal is made by passing the ball between the goal posts and below an imaginary straight line connecting the two elements of the goal, at a height from the ice of not more than eighteen inches.

23. There shall be two twenty-minute halves.

24. A foul shall be called if any player: (1) touches the ball with his hands; (2) blocks or holds; (3) purposely trips another player; (4) throws his stick at the ball; (5) goes within the goal-tender's circle; (6) kicks the ball into the goal; (7) drives the ball through the goal from the rear; (8) strikes the ball while any portion of his body is in contact with the ice.

25. The goal-tender's circle shall include the ice within a radius of two feet from the center of the goal.

26. The duties of the umpires shall be to decide if the ball goes within the required goal limits.

27. The duties of the referee shall be to have general charge of the ball, to call time, and to declare the fouls. The decision of the referee shall be final, and any club refusing to play the game out shall be declared the loser.



## CURLING

"There draw a shot; there lay a guard;  
 . And here beside him lie, man;  
 Now let him feel a gamester's hand;  
 Now in this bosom die, man.  
 There fill the port, and block the ice;  
 We sit upon the tee, man!  
 Now take this in-ring sharp and neat,  
 And make this winner flee, man."

CURLING has long been recognized as the national sport of Scotland,—an honor in which it has never been supplanted even by golf. Although it has become known in nearly every country in which ice abounds, it never seems to lose its distinctive Scottish ring, and wherever a Curling rink is to be found, it is almost sure to owe its existence to Scotchmen. When first introduced into this country, some of the features of the game were considered ludicrous, but as it became better known, and the scope it offers for display of skill became understood, ridicule gave way to admiration. At the present time there are numerous Curling clubs in the northern part of this country and in Canada, and each season sees an increase in the popularity of the sport.



In principle, Curling resembles quoits more than any other familiar game, since the object of the curler is to play his stone so as to cause it to stop as near as possible to a designated spot called the *tee*. Ice is, of course, the first requisite for Curling, and the nature of the play requires that the ice of the rink be smooth and free from obstructions.

The form and size of the rink are described in Section 1 of the appended rules. Although Curling is best enjoyed in the open air, it is often played on artificial ice rinks, where the ice can be kept in good condition during all kinds of weather.

## THE EQUIPMENT

THE curler's outfit is not expensive, consisting only of a broom, or *kowe*, with which to sweep the ice, and a pair of curling stones. These stones are the chief part of the curler's equipment, and he is very careful to see that they are perfect in size and shape, and that they are exactly



matched. The material from which they are made is any kind of hard, tough rock that is susceptible of a very smooth finish. Boulders of about the size required are generally used, and great care is exercised in shaping and polishing them. Some players prefer iron blocks to stones, their advantage being that they are better suited to withstand hard knocks and the effect of frost. Stones made from boulders usually weigh from thirty-five to thirty-eight pounds, while the usual weight of iron "stones" is from sixty to seventy pounds. No stone is allowed in play, the circumference of which exceeds thirty-six inches, and the thickness must be not less than one-eighth of the greatest circumference. Each stone has two playing sides, one for hard, smooth ice, and the other for a softer and rougher surface. Usually, the latter side is highly polished, and is so curved that it passes easily through slush or over slightly rough ice. Sometimes a small hollow, about two and one-half inches in diameter, is ground out of this polished surface, leaving an edge or rim which aids the curler in directing the course of the stone. The side that is used for keen ice is not so highly polished as the other, and has a much larger hollow, which is usually from five to seven inches in diameter. Each stone is fitted with a reversible handle and a bolt by which the handle may be secured to the middle of the stone on either side. The open, or swan-necked, handle is the most common, though some players prefer the closed, oval variety. The game is in charge of two skips, or directors, who are the captains of the opposing sides.

By reference to the accompanying diagram, and the following rules and directions for play, a clear understanding of the game may easily be obtained.

(Diagram of Curling Rink) (Fig. 21)

## RULES FOR CURLING—RINK MEDALS

### RULE I

SECTION I. The length of the rink for play shall be forty-two yards. The tees shall be placed thirty-eight yards apart. In a continued straight line with the tees, and four yards behind each, a circle eighteen inches in diameter shall be drawn on the left-hand side of that line (looking toward the center of the rink) with the circumference just touching it. Each player, whether standing on the ice or on any rest, support or abutment, whatsoever, permitted by the rules, when playing his stone shall place his right foot within that circle and his left foot on the left-hand side of the central line. (The circle shall be on the opposite side of the line if the player be left-handed.) When a hack, or hatch, in the ice is used, it must be behind the circle, and not of greater length than fourteen inches, measuring from the central line. A circle with a radius of seven feet shall be described from each tee as a center, and no stone shall count which passes this and goes beyond a line drawn across the farther edge of the circle; such stone shall be treated as out of the game and shall be put off the ice. Should this be neglected, and another stone stopped against the first and within seven feet of the tee, the stone so stopped shall be counted in the game. Each hog-score shall be distant from its tee one-sixth part

of the whole rink played. Every stone shall be a *hog* which does not clear a square placed upon this score; but no stone shall be considered a hog which has struck another stone lying over the hog-score. A line shall be drawn on the ice at right angles to the rink, half-way between the tees, which shall be called "the middle line." In no case shall the rink played be less than thirty-two yards in length.

SEC. 2. As soon as the rink is marked off, and before beginning play, the terms of the match must be distinctly stated and fixed by the skips, if they have not been previously arranged. These terms may be either that the parties shall play for a specified time, or that a game of a certain number of shots or heads shall be played. Though the terms have been previously fixed, they should be repeated.

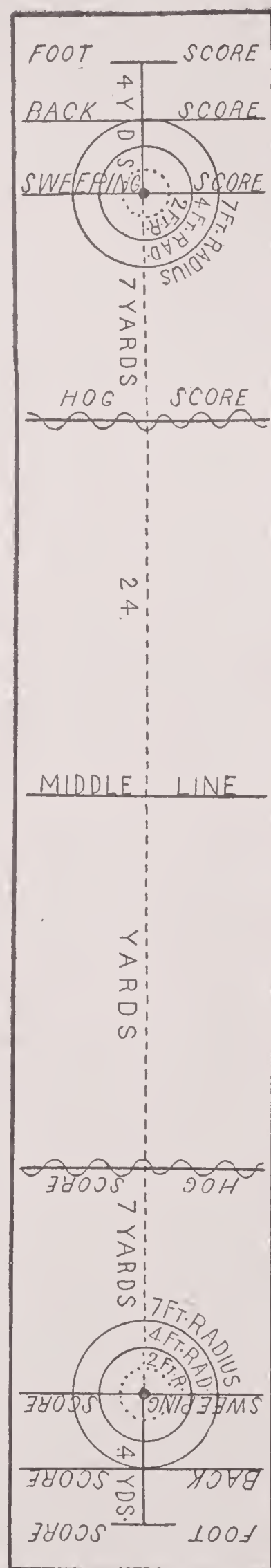
SEC. 3. Every rink shall be composed of four players on a side, each provided with two stones. Before beginning the game, each skip shall state to the opposing skip the rotation in which his men are to play, and the rotation so fixed is not to be changed during the game. Each player shall play one stone, alternately with his opponent, till he has played both.

SEC. 4. The two skips opposing each other shall settle by lot, or in any other way agreed upon, which party shall lead, after which the winning party of the last end shall lead.

SEC. 5. All curling stones shall be circular in shape. No stone shall weigh more than forty-four pounds nor less than thirty-two pounds, nor shall be more than thirty-six inches in circumference, nor of a height less than one-eighth part of its greatest circumference, unless the club uses iron blocks. No iron block shall exceed seventy pounds in weight, and the same rules as to size which govern the stones must govern the iron blocks. Players may change the sides of their stones once during the game, but they shall not be allowed to change them oftener, or change stones after the beginning of the game, unless by mutual consent of the skips. If, however, one or both be broken, the largest portion of the broken stone shall count, and it need not be played with again. If the played stone rolls and stops on its side or top, it shall not be counted, but shall be put off the ice. Should the handle quit the stone in the delivery, the player must retain it in his hand, otherwise he shall not be entitled to replay his shot.

SEC. 6. Each party, before beginning to play, and during the course of each end, shall be arranged along the sides of the rink, in any places between the middle and the tee selected by their skip; but no party, except when sweeping according to the rule, shall go on the middle of the rink, nor cross it, under any pretense whatever. The skips alone shall stand at or about the tee, as their turn requires.

SEC. 7. If a player plays out of turn, the stone so played may be stopped in its progress and returned to the player,



(Fig. 21)



If the mistake be not discovered till the stone is again at rest, the opposite party shall have the option of adding one to their score, and letting the game proceed in its original rotation, or of declaring the end null and void.

SEC. 8. The sweeping department shall be under the exclusive direction and control of the skips. The player's party shall be allowed to sweep when the stone is past the middle line, and till it reaches the tee; the adverse party, when it has passed the tee. The sweeping shall always be to one side or across the rink; and no sweepings shall be moved forward and left in front of a running stone, so as to stop or obstruct its course. Either party may sweep behind the tee, before or after the stone has been played, or while it is in motion.

SEC. 9. If in sweeping, or otherwise, a running stone be marred by any of the party to which it belongs, it shall be put off the ice; if by any of the adverse party, it shall be placed where the skip of the party to which it belongs shall direct. If marred by any other means, the player shall replay his stone. Should any played stone be accidentally displaced by any of the opposing party before the last stone is played, for the first offense it shall be replaced by the skip to whom it belongs in as nearly as possible its original position before it was displaced; and for the second offense by the same party, the opposing party shall have the option of declaring the end null and void, or of replacing the stone. If a played stone be moved accidentally by any of the party to whom it belongs, it shall be left to the decision of the opposing skip to replace the stone as near as possible to where it was before being moved, or to allow it to remain where it was accidentally moved. No stone displaced by either party shall be allowed to be moved if it has been struck or moved by a running stone before the claim for moving has been made.

SEC. 10. Each player shall come provided with a besom, shall be ready to play when his turn comes, and shall not take more than a reasonable amount of time to play his stone. Should he accidentally play a wrong stone, any of the players may stop it while running; if not stopped till it is again at rest, it shall be replaced by the one that ought to have been played.

SEC. 11. No measuring of shots shall be allowed previous to the termination of the end. Disputed shots shall be determined by the skips, or, if they disagree, by the umpire; or, when there is no umpire, by some neutral person mutually agreed upon by the skips, and his decision shall be final. All measurements shall be taken from the center of the tee to the part of the stone which is nearest it. No stone shall be considered within or without a circle unless it clear it, and every stone shall be held as resting on a line if it does not completely clear it—in every case this is to be determined by placing a square on the ice at that part of the circle or line in dispute.

SEC. 12. Each skip shall have the exclusive regulation and direction of the game for his party, and may play in whichever part of it he pleases; but having chosen his place at the beginning, he must retain it till the end of the game. No skip, when his turn to play comes, after having appointed one of his party to take charge for him, shall be allowed after leaving the ice to go back and examine the end, but shall take directions from the party appointed by himself. The players may give advice, but cannot control their director; nor are they, upon any pretext, to address themselves to the person about to play. Each skip, when his own turn to play comes, shall name one of his party to take charge for him. Every player shall follow implicitly the directions given him. If any player shall improperly speak to, taunt, or interrupt, another while in the act of delivering his stone, one shot shall be added to the score of the party interrupted, and the end shall proceed as before.

SEC. 13. If from any change of weather after a game has been begun, or from any other reasonable cause whatsoever, one party shall desire to shorten the rink, or to change to another, and if the two skips cannot agree upon it, the umpire for the occasion shall be called, and after seeing one end played, he shall determine whether the rink shall be shortened, and how much, or whether it shall be changed; and his decision shall be final and binding on all parties. Should there be no umpire appointed for the occasion, or should he be otherwise engaged, the two skips may call in any curler unconnected with the disputing parties whose services can be most readily secured, and, subject to the same conditions, his power shall be the same as that of an umpire.

## RULES FOR LOCAL COMPETITION

### POINT GAME

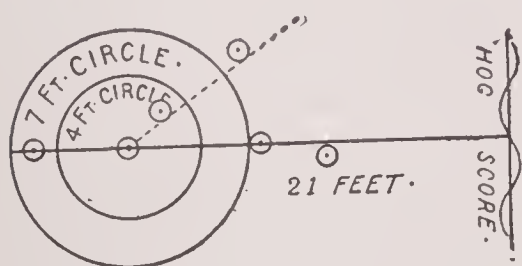
1. Competitors shall draw lots for rotation of play, and shall each use two stones.
2. The length of the rink shall not exceed forty-two yards; any less distance shall be determined by the umpire.
3. Circles of seven feet and four feet radius, respectively, shall be drawn around the tee, and a central line shall pass through the center of the circles to the hog-score.
4. Every competitor shall play four shots at each of the eight following points of the game, *viz.*, Striking, inwicking, drawing, guarding, chap and lie, wick and curl in, raising, and chipping the winner, according to the following definitions. (See diagram.)
5. In Nos. 2, 6, 8 and 9, there are two chances on the left and two on the right.
6. The following diagram to be drawn on the ice previous to playing:—  
(Diagram, Fig. 22)
7. The various points and the values allowed for them in the point game are given in the following diagrams and definitions:—

### THE POINTS

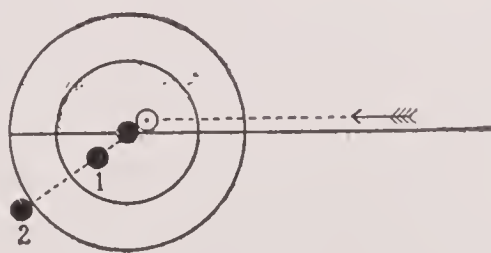
1. *Striking*—A stone placed on the tee, if struck, shall count one; if struck out of the seven-foot circle, the play shall count two.

(Diagram, Fig. 23)

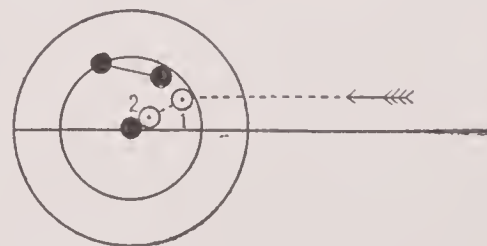
2. *Inwicking*—A stone being placed on the tee, and another with its inner edge two feet six inches from the tee, and its fore edge on a line drawn from the tee at



(Fig. 22)



(Fig. 23)



(Fig. 24)

an angle of  $45^\circ$  with the central line, if the played stone strike the latter on the inside, the play shall count one; if it perceptibly move both stones, the play shall count two.

(Diagram, Fig. 24)



3. *Drawing*—If the stone played lie within or on the seven-foot circle, the play shall count one; if within or on the four-foot circle the play shall count two.

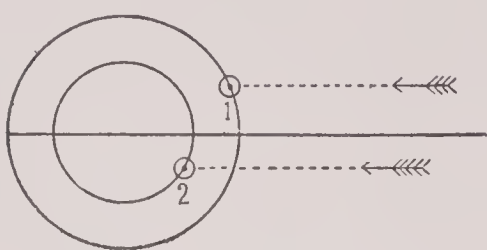
(Diagram, Fig. 25)

4. *Guarding*—A stone being placed on the tee, if the stone played rests within six inches of the central line, the play shall count one; if on the line, the play shall count two. It must be over the hog-score, but must not touch the stone to be guarded.

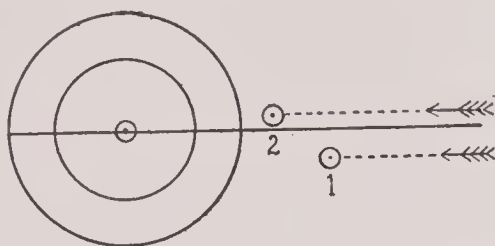
(Diagram, Fig. 26)

5. *Chap and Lie*—If a stone placed on the tee be struck out of the seven-foot circle, and the played stone lie within or on the same circle, the play shall count one; if struck out of the seven-foot circle, and the played stone be within or on the four-foot circle, the play shall count two.

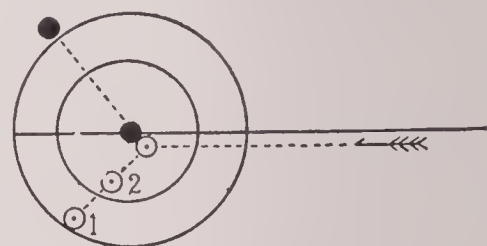
(Diagram, Fig. 27)



(Fig. 25)



(Fig. 26)



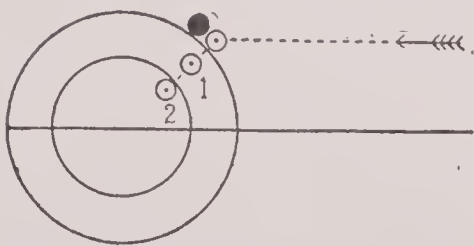
(Fig. 27)

6. *Wick and Curl in*—A stone being placed with its inner edge seven feet distant from the tee, and its fore edge on a line making an angle of  $45^\circ$  with the central line, if the stone be struck, and the played stone curl on or within the seven-foot circle, the play shall count one; if struck, and the played stone curl on or within the four-foot circle, the play shall count two.

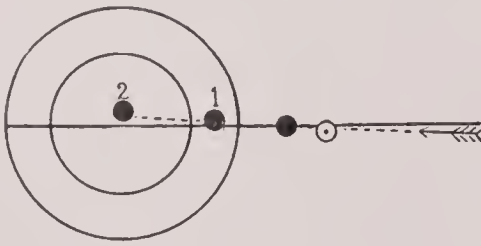
(Diagram, Fig. 28)

7. *Raising*—A stone being placed with its center on the central line and its inner edge eight feet distant from the tee, if struck into or on the seven-foot circle, the play shall count one; if struck into or on the four-foot circle, the play shall count two.

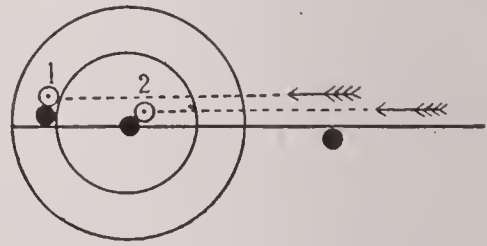
(Diagram, Fig. 29)



(Fig. 28)



(Fig. 29)



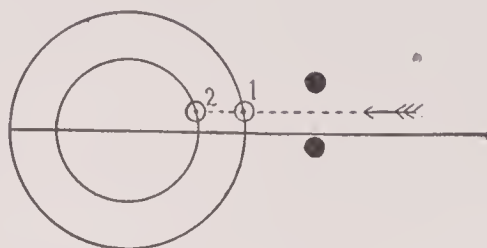
(Fig. 30)

8. *Chipping the Winner*—A stone being placed on the tee, and another with its inner edge ten feet distant, just touching the central line, and half guarding the one on the tee, and a third stone being four feet behind the tee, with its inner edge touching the central line, but on the opposite side from that on which the guard is placed, if the played stone strikes the stone placed behind the tee, the play shall count one; if it strikes the stone on the tee, the play shall count two.

(Diagram, Fig. 30)

9. *Drawing through a Port*—A stone being placed with its inner edge on the central line, ten feet in front of the tee, and another stone on the opposite side with its inner edge two feet from the central line, if the played stone pass between these two stones without touching either, and rest within or on the seven-foot circle, the play shall count one; if within or on the four-foot circle, the play shall count two.

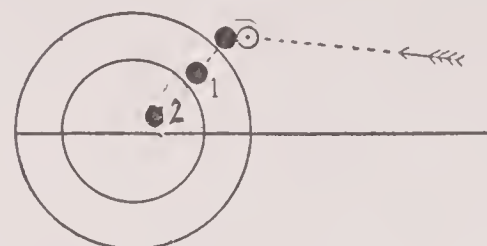
(Diagram, Fig. 31)



(Fig. 31)

10. *Outwicking*—In the event of two or more competitors gaining the same number of shots, they shall play for shots at outwicking, that is, a stone being placed with its inner edge seven feet distant from the tee, and its center on a line making an angle of  $45^{\circ}$  with the central line, if struck within or on the seven-foot circle, the play shall count one; if within or on the four-foot circle, the play shall count two. If the competition cannot be decided by the shots, the umpire shall order one or more of the preceding points to be played again by the competitors who have tied.

(Diagram, Fig. 32)



(Fig. 32)

## GLOSSARY

*Bias*—Any deviation of the ice from the level.

*Boardhead*—The whole of the seven-foot circle around the tee (which see). Also called *House* and *Parish*.

*Bonspiel*—A curling match between two rival districts or parishes. To be distinguished from a *spiel*, which is a match between members of the same society, or between a limited number of adversaries.

*Borrow*—The width of ice to be allowed for bias, if a stone played without a twist is to find its mark.

*Break an Egg on*—To touch another stone gently.

*Brittle Shot*—An angular cannoning or caroming shot.

*Brougs*—Circles drawn around the tee inside the seven-foot circle, to assist the players in deciding which stone is nearest.

*Bullet Shot*—A stone played hard and straight in order to drive another from its position.

*Cannoning*—Driving one of the guards (which see) against the winner (which see) with such velocity and at such an angle that both go off the tee, while the player's stone follows on and takes the place the winner has left.

*Chipping*—Striking a stone only a small part of which is exposed.

*Chuckle*—To pass through a narrow opening between two stones and then by a series of wicks (which see) from other stones to reach the destination.

*Cowe*, or *Kowe*—A besom or broom made of twigs, with which the ice is swept.

*Crampit*—Originally a plate of iron, shod with spikes or nails, which was fastened to the side of the player's boot; now a plate secured to the ice, on which a player stands when delivering a stone.

*Draw*—To play a stone gently.

*Drive*—To deliver a stone with extreme force in order to dislodge a winner or a guard and drive it out of the boardhead.



*Drug Ice*—Soft or dull ice on which the stones slide heavily.

*Dry*—A seam running through a stone, which renders it liable to break.

*Edge in*—To rub one stone slightly against another in playing, so as slightly to change the course of the moving stone.

*Fill the Ice or Port*—To play a stone so as to block an opening between two stones.

*Fit the Tee*—To set the foot firmly upon the heel of the fixed crampit before delivering the stone.

*Flee the Ice*—To deliver a stone in a direction or with a force such as to send it off the rink.

*Fore Han'*—The first player on a side.

*Grannie's Wing, to Get Under*—To glance from a stone lying in the way at an angle, and obtain shelter behind another.

*Guard*—(1) A stone that lies in a direct line before another; (2) To play such stone.

*Hack, or Hatch*—A hollow or niche cut in the ice four yards behind the tee, in which the player puts his foot to prevent it from slipping, in case he does not make use of the crampit.

*Hands Up!*—The command of the skip (which see) to stop sweeping.

*Harried*—A side is said to be "harried" when, owing to the condition of the ice, the players are unable to send their stones up to the tee.

*Head*—The portion of the game in which all the players have delivered their stones, and have counted the winning shot or shots.

*Hin' Han'*—The last player on a side, who also acts as skip.

*Hog*—A stone which, after delivery, fails to pass the hog-score.

*Hog-score*—A line drawn across the rink at a distance from the tee of one-sixth the length of the rink. A wavy line is usually drawn over it to distinguish the score from a crack.

*Home*—The middle of the rink, which is hollowed by the passage of the stones.

*In-turn*—A twist given to the stone which causes it to describe a curve to the right.

*Inwick*—A stroke which reaches the tee, or object stone, by rebounding from the inside edge of another stone lying to one side. Also used as a verb with a similar meaning.

*Kittle*—(1) A shot that is difficult is said to be "kittle"; (2) To "kittle" means to work energetically, especially at sweeping.

*Lie Shot*—One that causes the stone to come to rest nearest the tee.

*Mar*—To disturb a stone while in motion, whether by accident or otherwise.

*Out-turn*—A twist given to the stone, which causes it to describe a curve to the left.

*Outwick*—A stroke which hits a stone on the outer edge and drives it toward the center. Also used as a verb with a similar meaning.

*Patlid*—A stone which comes to rest exactly on the tee.

*Port*—A space between two stones lying near together.

*Raising*—Driving a partner's stone up to or near the tee.

*Rebutting*—A stroke delivered with extreme force in order to clear the board-head as far as possible.

*Red the Ice*—To drive off the guards by a strong shot in order to lay open the tee or the winner.

*Ride*—To deliver a stone with such force upon another that the latter is driven from the boardhead.

*Rink* — (1) The four members composing a side; (2) The area on which the game is played.

*Shot* — (1) The unit of scoring each stone nearer the tee than any opponent counting one point; (2) The delivery of a stone.

*Sidelin' Shot* — A stone lying on each side of the tee.

*Skip, Director, or Driver* — The captain of a side, who gives his men elaborate advice as to the play, and controls the sweeping.

*Sole* — (1) The base of a curling stone; (2) To "sole" means to deliver the stone on the ice.

*Souter* — To score a love game; not to allow the opponents to score.

*Spend the Stone* — To play a wasted shot.

*Striking* — Hitting with a stone another placed on the tee, with sufficient force to drive it out of the circle.

*Stug* — A shot made by accident.

*Sweeping* — Clearing the ice with a besom. (Sec. 8 and 9.) When snow is falling the rink may be swept from tee to tee, but in ordinary cases only from the nearest hog-score.

*Tee* — A point in the ice at the center of the boardhead.

*Winner* — The stone lying nearest the tee at any particular moment in the game.

## TOBOGGANING AND COASTING

WHEN Winter arrives, in all his glory of ice and snow, and the landscape is covered with his fleecy mantle, the time has come for the reign of coasting, the "king of winter sports." It is then that toboggans and sleds should be brought forth from their storage places, and slides should be prepared to receive the fleet coursers that are to glide swiftly over them. Who has grown so old, or has so far outlived his youth, as to have forgotten the delights of this healthful and invigorating sport? And who among the younger generation has found a modern amusement that gives greater pleasure than the old-fashioned sport of Coasting, and its more recent outgrowth — Tobogganing?

### TOBOGGANING

MANY years ago the Indians of the northern part of this continent made use of a snow vehicle—a development of the pack sled—to which they gave the name Odabagan. In this rude device, made of strips of bark held together by thongs of rawhide, we find the prototype of the light, graceful toboggan, which to-day is a model of mechanical construction. It is really a long, narrow sled without runners, and is usually constructed either of a single thin board about sixteen inches wide, or of two or more narrower boards placed side by side, so that the width is twenty or more inches. The forward ends of these boards are curved up and then over backward, so that the coasters





are to some extent protected from the wind and flying particles of snow or ice, and the vehicle will easily surmount small obstacles and will readily go up an incline. The bottom of the toboggan is strengthened by small wooden crosspieces, bolted or nailed to the upper side about a foot apart.

There is a small hand-railing, two or more inches in height, running along either side, to which the coasters may cling. Long reins are attached to the "headboard" on either side, so that the toboggan may be drawn like a sled. The whole structure is very light, and may be carried or dragged up a long hill with little more exertion than would be required in walking up empty handed.

The modern toboggan slide, which is constructed with such nicety as to require the services of a civil engineer, was a natural result of the desire on the part of the tobogganers to increase the distance, and more especially the speed, of the coast. The simplest form of slide is made by cutting a trough in the deep snow on a hillside, which is afterward watered and left to freeze so that it makes a smooth, icy surface for the bed of the chute, or slide. Since the motion of the toboggan is so swift as to render its guidance impossible, the slide is cut *into* the snow, and banks are left on either side. These should be a foot wider apart than the width of the toboggan, and must never be less than six inches in height, and twelve inches is even better, so as to allow for the gradual filling up of the chute with snow and ice. The slide is often made steeper by having the head elevated on a trestle built of wood.

A platform is constructed on the trestle, the ascent to which may be made either by means of steps, or up a gradual incline having wood or metal cleats to furnish a foothold. The chute is built from the platform to the ground, and its bed is iced by pouring water on it, which is then left to freeze. This process must be repeated until the successive layers of ice form a surface of moderate thickness, so that there will be no danger of the toboggan coming in contact with the wood of the chute. At the foot of this artificial incline is the slide cut in the snow, as previously described, or, in some cases, the trestle is built on the bank of some body of water, so that the toboggan goes from the chute out upon the ice. The momentum acquired by the coast down one of these elevated chutes is sufficient to carry the toboggan a great distance, and the snow slide or ice space at the bottom should be of sufficient extent to guard against any possibility of the course of the toboggan being obstructed.

A slide is often made entirely of a chute supported on wooden trestles, and sometimes it has several successive inclines. In the latter case the coaster depends upon the momentum gained from one descent to carry him up and over the next elevation. Slides may also be built with curves which add considerably to the novelty and excitement of the sport. These, however, are dangerous and should be planned carefully, and built with the outer edge of a curve much higher than the inner edge to guard against any possibility of the vehicle "jumping the track." There is no danger on a properly constructed slide, but in consideration of the frightful conse-

quences that would result from a fall from a high trestle, care should be taken that the chute is strongly supported and that the sides are high enough to keep the toboggan in the track.

The liability to colds is less in this than in the other winter sports. The swift downward rush exhilarates, but is not of sufficient duration to chill the coaster. The climb back to the top of the slide warms the body and starts the blood in circulation so rapidly that the exertion is forgotten in the feeling of lightness and unbounded energy that is induced. The warm, woolen clothing usually worn is a still further protection against taking cold. Toboggan costumes are made of prettily colored, blanket-like material, and consist of long ulsters for the women and knickerbockers and jackets with belts for the men. The long, peaked cap, with its bright colored tassel, is worn by both sexes; it is not only picturesque, but serves as a warm covering for the head and ears.

Jollity and good-fellowship are invariable accompaniments of tobogganing. Formality is laid aside and fun and laughter are the order of the hour. To stand at the top of a slide and watch the laughing, shouting loads of coasters gliding swiftly down the incline, while the torches with which it is always lighted at night cast a thousand reflections on the sparkling snow and ice, is attractive in itself, but to be an active participant in the sport, is a pleasure that must be experienced to be fully understood. Tobogganing is a sport for all,—men, women, and children,—fascinating in its life, action, and excitement, and beneficial in its stimulating after-effects.

A home-made toboggan slide, about eight feet high, may be built at a cost of five or six dollars. The parent who constructs one such in his yard, will find it an excellent investment. When there is snow, the children use it all day long, apparently never wearying of it. It keeps them at home, out of mischief, and in good health.

## COASTING

ORDINARY Coasting, though not to be compared to tobogganing, is a worthy parent of its attractive offspring, and is even better known than the latter. Few cities afford facilities for the construction of a toboggan slide, and not every boy or girl is supplied with a toboggan. But hills are usually to be found, and with the coming of the first heavy snowfall, the small boy soon prepares for himself and his companions a very satisfactory slide. Here all meet on an equal footing, and the boy with the home-made sled, constructed of materials taken from a dry-goods box, sometimes derives as great enjoyment from the sport as does his fellow who is provided with a handsomely built and painted "Rob Roy" or "Snow King."

The "double-runner" is every boy's ideal of what a sled should be, and though he may be unable to secure one ready-made, he will often give





evidence of his mechanical skill and ingenuity by constructing the coveted steed for himself. The necessary materials are two ordinary sleds, a long iron bolt and a few screws, a board twelve to fifteen inches wide by one inch thick and four feet long, and a square block of wood about an inch thick. The board should be securely fastened with screws to the under side of the bottom of the rear sled, midway between the runners, so as to project about two and one-half feet in front. The block should next be screwed to the center of the bottom of the front sled in the middle, and a hole slightly larger than the diameter of the bolt, bored through both the block and the bottom of the sled. The bolt should then be passed from the upper side through this hole, and a hole bored about three inches from the end of the board secured to the rear sled, and a nut should be securely screwed on the bolt. A steering handle and a bell may now be added, though they are not necessary, and the double-runner is ready for use. A party of boys and girls may have great sport with this kind of sled, and though there is some likelihood that it may deposit its riders in a snow bank, there is slight danger of injury on a hillside or other slide where there are no obstructions and where it is not too steep.

The most approved method of steering a sled of any description continues to be by one of the coasters kneeling behind the others, or at the rear of the sled if alone, and dragging one foot in the snow on the side toward which he desires his vehicle to turn. It is surprising how accurately the course of the sled may be governed in this manner.

Though its enjoyment has always been confined largely to the age of boyhood and girlhood, Coasting, like tobogganing, is a sport for all, and many a care-worn business man or jaded society woman may renew youth, and derive both pleasure and mental physical benefit, from hours spent with a "double-runner" or its modern contemporary, the toboggan.

## SKATING

IN ALL countries where the climate is cold enough in winter to produce ice, Skating is regarded as one of the most fascinating of winter sports. The healthy glow that it brings to the cheeks, the sense of buoyant lightness and glorious freedom that pervades the skater's whole being as he glides swiftly over the frozen surface of pond, lake, or river, must be felt to be understood.

It is difficult to lay down an exact rule as to the earliest age at which a child should be permitted to learn to skate, since this will depend much upon his temperament and physical powers. It is safe to say, however, that the normal child when eight years of age, or even earlier, may put on skates in the house and learn first to stand, then to walk on them. When the ankles become strong enough to

enable him to place his feet alternately upon the floor, at the same time keeping the blades of the skates upright, the beginner may be trusted on the ice.

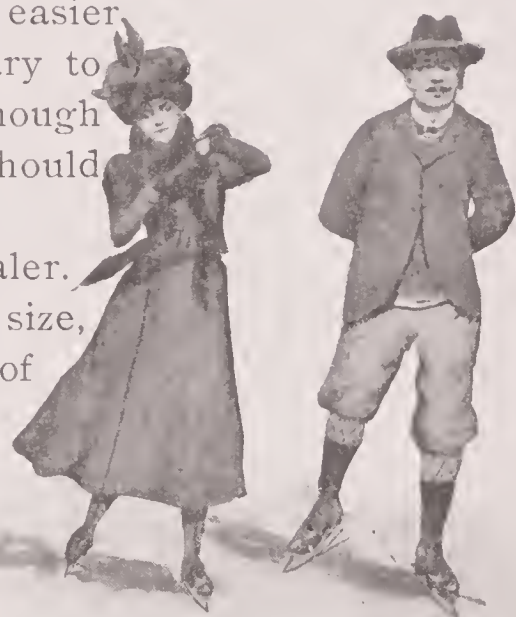
Having progressed thus far, he must depend upon nature to furnish ice suitable for Skating. Both of these are, of course, to be found in artificial ice rinks, but only the residents of large cities are likely to have access to such. Ponds, rivers, small lakes, and canals, especially if they be well sheltered from the wind, furnish the best natural surfaces.

### INSTRUCTIONS FOR BEGINNERS

ICE of moderate roughness, rather than that having a hard, glassy surface, is best for the beginner, whose first efforts will be devoted principally to maintaining an upright position. This will be much easier if the ice be not too "glary." It is, perhaps, unnecessary to add that care should be taken to see that the ice is thick enough to be safe, and that air holes and other dangerous places should carefully be avoided.

The selection of skates may usually be left to the dealer. The prime requisites are that they shall be of the right size, and that they may be fastened securely to the boots of the wearer. If straps are used, they should be adjusted so that the greatest security may be obtained with the least pressure. The blade of the skate should not be underneath the middle line of the foot, but should lie in a plane passing through the heel and the big toe. Many skaters still prefer the old style of skates, which are secured to metal plates countersunk into the sole and heel, but the modern adjustable, "lever" skates, which may be fitted to almost any kind of footwear, are the more popular. For girls, skates fitted with leather ankle supporters are desirable, as they help to prevent "ankle-turning," which sometimes results in a severe strain.

Having prepared himself for his first lesson, according to the foregoing precepts, the beginner should walk firmly but cautiously out on the ice. At first it is advisable for him to support himself either by clinging to some movable support like the back of a chair, or by the assistance of some good skater. It is not always easy to assist a novice, but it may be done by standing behind him and holding his elbows in the palms of the hands. Take plenty of time to learn to stand safely on your skates, and thus to acquire confidence. Stand nearly upright and be careful not to lean too far forward, which every one has a natural tendency to do. Keep the feet close together, and turned outward at an angle of nearly forty-five degrees with each other. Every joint should be free and supple, with the exception of the ankle and instep, which cannot be too rigid. If now the beginner takes a few ordinary steps, he will find that when one foot





leaves the ice it gives the other a tendency to glide forward, and that when the effect of this impetus ceases, the first foot must again be brought up and planted on the ice to support the body.

This is really a stroke in its simplest form. After walking about in this manner long enough to gain confidence, the beginner may essay a full double stroke as set forth in the following:—

Plant the left foot firmly, with the inner edge of the skate bearing on the ice; give the body a slight impetus by a thrust of the left leg, and, throwing the right shoulder forward, advance the right foot until the outer edge of the right skate takes on the ice, the weight of the body being shifted to the right leg. The first part of the stroke is taken with the runner perpendicular to the ice, in a nearly straight line and pointed at an angle of about  $30^{\circ}$  to the right of the direction in which the skater is facing, but as the stroke nears completion its course turns outward, and the blade of the skate leans slightly in the same direction. Bring the left foot up to the right, and turning the latter slightly in, so that the inner edge of the skate touches the ice, thrust with the right leg, and advance the left foot as you did the right in the first half of the stroke, at the same time throwing the left shoulder slightly forward.

The arm should swing naturally and easily, the left arm and right leg advancing together, and so with the right arm and left leg. Many of the best skaters never swing their arms at all, and after the first few lessons, it will be found that there is no method more graceful than folding them behind the back or using a muff.

In bringing forward the foot with which the thrust was made, to its position alongside the other, the skate should not be raised more than an inch or two from the ice, as this gives greater neatness to the stroke and prevents unnecessary exertion. The succeeding strokes are made the same as the first, the force of the thrust gradually increasing until reaching full speed. An effort should be made to acquire a long, steady stroke, which always distinguishes the good skater. The length of stroke must necessarily vary greatly with different persons, and is largely a matter of judgment, but from five to seven yards may be given as the average of the ordinary man.

After the stroke, the next thing for the beginner to learn is to stop. There are in general use three different methods of doing this. Formerly a common way of stopping was to bring the feet together with the skates parallel, and by turning up the toes force the sharp heels of the runners into the ice. The knees were slightly bent, and the upper part of the body was inclined backward, to preserve the balance. Nowadays, however, the heels of skate runners are rounded, so that this method is little practiced. Another method is to bring the feet together, with the toes turned inward so that the inner edges of the blades take against the ice at an angle to the skater's course. A third way is to bring the feet together with the runners parallel, and, keeping them in the same position relative to each other, to turn them nearly at right angles to the direction in which the skater is going. As the body must be inclined well backward to pre-

serve the balance, the edges of the runners take against the ice in such a way as to bring the skater quickly to a stop.

The beginner will have little difficulty in learning to change direction. It is comparatively easy to regulate the amount of curve in either half of the stroke; and in order to turn toward the right, for instance, the body should be faced easily in that direction and the right half of the stroke turned well outward. Then when the left half of the stroke is taken, it may be made nearly straight, and thus in one full stroke the direction may be changed as desired.

Thus far, all progress has been made in a forward direction, but the skater often desires to skate backward. In learning to do this, the beginner must repress the natural instinct to put one foot behind the other, as in walking backward. The proper way is to stand with the feet moderately close together and the toes turned in; acquire impetus by a thrust of the right foot, and balance the body on the left till the force of the stroke is nearly expended; then place the right alongside the left, which becomes the thrusting foot, and effect the second half of the stroke in a manner similar to the first.

The principal difficulty experienced by the beginner in learning to skate backward is caused by the fear of leaning well back, as he should do, on the backward glide. But after a little practice, taking short strokes at first, he will acquire confidence, and will soon be able to progress either backward or forward with almost equal facility. But the balance is far more delicate in skating backward than forward, and the danger of falling is correspondingly greater.

Before taking up the more advanced stages in the art of skating, it may be well to mention briefly several rules of value to the beginner in both his first and his later efforts.

#### GENERAL RULES

1. Learn to put on and take off your own skates without assistance.
2. Never venture upon ice until you have assured yourself that it is safe, and do not endanger your comfort, and possibly your life, by going near open water or taking risks of any kind.
3. Do not look down more than is necessary to enable you to avoid cracks and other obstacles on the ice.
4. Concentrate your attention on the poise and sway of the body, rather than on the movements of the feet.
5. Make the side-thrust with the whole length of the skate blade.
6. Do not make scratch thrusts with the toe, but keep the skates as near the ice as possible throughout the stroke.
7. Keep the feet as near together as you can without noticeable effort.
8. Remain on the employed foot long enough to make a full, regular stroke.
9. Avail yourself of every opportunity of following a good skater; keep close behind him and imitate each movement of his body, arms and legs.
10. Never throw stones or other obstacles on the surface of the ice which may be used for skating.



## FIGURE SKATING

HAVING learned to use the plain stroke, both forward and backward, and to turn and stop both easily and gracefully, the beginner is prepared to undertake some of the simpler kinds of figure skating. As has been stated heretofore, in skating the feet should follow the body and be controlled by it, and this is especially true if the skater desire to deviate from a straight line. Figure skating, though executed with the feet, is really made possible by getting the body into a position which will enable the feet to be turned in the desired direction. It is natural for the novice to give no attention to the body, but to try to twist the feet so as to execute whatever movement he may be attempting. This cannot be done, and almost invariably results in a fall. In the following description of a few of the simple figures, particular attention should be paid to the movements of the body, and in every case the following rule should be observed: Whenever it is decided to make a turn which necessitates a change from one edge to the other, just before the full turn is executed the upper part of the skater's body should be faced in the direction of the new curve which will result from the turn, so that no alteration in the position of the body will then be necessary.



What are known as the four "rolls" should first be learned, since they are the basis of all fancy skating.

These are respectively designated as the "outside-edge forward," the "outside-edge backward," the "inside-edge forward," and the "inside-edge backward."

The forward outside-edge roll to the right is made as follows: The impetus is obtained as in plain skating, but the right foot is turned outward more than in the plain stroke, the right arm is drawn back, and the left shoulder and the whole body swung forward to the right. The stroke to the left is taken in a similar manner (Fig. 1) the left foot being brought forward and placed a few inches in advance of the right. The curves should be large and regular, and should not turn outward so much as to make the skater advance slowly.

The outside-edge backward (Fig. 2) is made in a relatively similar manner, one foot being placed directly behind the other, and the head turned to the right as the left foot is put down, and *vice versa*. This movement should be practised very slowly at first, the speed and length of stroke being increased gradually.

The inside-edge forward on the right foot (Fig. 3) is started in the same manner, and from the same position, as the outside-edge. The right knee is bent, and the body is inclined forward at the beginning of the stroke, both being straightened as soon as momentum is acquired. The stroke is taken on the inner edge of the runner, instead of on the outer, as in the outside-edge roll, and the curve is to the left. The principal difficulty is the tendency of the curve to curl inward, thus making small,

irregular strokes. To prevent this, the body should be held erect, and the unemployed leg kept well to the rear, with the toe turned outward.

The inside-edge backward (Fig. 4) is by far the most difficult of the "rolls," and should be practiced last. To start this stroke on the right foot, the skater should stand with his left foot nearly perpendicular to the line of motion, and with his right foot parallel to the left, the toe of the former being near the heel of the latter. He should turn his head so as to look over his left shoulder, and, obtaining his impetus from a thrust of the left leg, describe a curve to the left on the right foot. The stroke is completed when this foot is nearly at right angles to the line of motion, and the roll on the left foot is made from the same relative position as that on the right, and in a similar manner.

After becoming proficient in the four rolls, the skater is prepared to undertake any of the almost infinite number of other figures and movements. Two of these are the "spread-eagle," which may be made either forward or backward, and "cutting the circle," which may also be done in both directions. To make the spread-eagle (Fig. 5), the skater, while going forward on one foot, turns the other so as to bring the two heels together, with the feet nearly in line. The body is bent forward, and its weight is equally divided on the two legs. The spread-eagle is made forward or backward, according as the feet are so placed as to make the line of motion a curve in the direction in which he is facing, or in the opposite direction. Cutting a circle forward (Fig. 6) consists in describing that figure by continually putting the outside foot over forward and inside of the other. In the backward circle, the outside foot is put behind and inside of the other.

Even before the beginner has become proficient in the rolls, he will have a natural desire to master the "figure three." (Fig. 7.) This is started with an outside-edge curve, and the turn is made by reversing the skate so as to bring the skater to an inner-edge backward. Just previous to the full turn, the whole body from the hips upward should be turned so as to be in a position suitable for the curve on which the skater will find himself after the full turn. If this be done the figure will be executed with surprising ease and with little danger of a fall.

Among the many feats performed by expert fancy skaters is that of tracing names with the skates on the ice. This degree of proficiency can only be attained, however, after long and necessarily tedious practice.

## SKATE-SAILING

CLOSELY connected with the sport of skating are Skate-sailing and ice-boating. The only real difference between the latter two is in the method of attaining the desired object—propulsion on ice by the agency of the wind. The simplest form of skate-sail may be seen almost any windy day wherever juvenile skaters are to be



found. The small boy discovers, as soon as he learns to stand on skates, that by holding out the lapels of his coat sidewise, and turning his back to the wind, he may attain a fair rate of speed with no further effort on his part. It was doubtless from this beginning that real skate-sails came into use. One thing that adds greatly to the popularity of this sport, is the fact that it may be enjoyed on ice that is too rough for ordinary skating, or that has been spoiled for the skater by a light fall of snow.

### THE SAILS

THERE are many varieties of skate-sails, both single and double, almost any one of which may be made easily and cheaply; and can be manipulated by any one who is a fair skater. But perhaps the simplest of all, and yet most desirable, is the "bat-wing," which may be made as follows:—



Spread upon the floor a piece of ordinary sheeting, or other available cloth, about six feet square, and tack the four corners in place. Lie on your back in the middle of the cloth, with the feet spread about a foot apart and the arms extended at right angles to the body. Marks should now be made on the cloth to indicate the positions of the crown of the head, the wrists and the ankles. Connect these points by straight lines marked with chalk or a lead pencil, so as to form a five-sided figure. Allowing about four inches for the hem outside the lines of the figure, cut the sail out and keep the spare pieces for future use. The hem should now be made either by hand, or, preferably, on a sewing machine. Make straps about an inch in width, of two thicknesses of the cloth taken from the left-over pieces, and sew them in place to go around each ankle, each wrist, the forehead and the waist. These straps should be made in two pieces, and the free ends of each pair may be connected by either a button or a buckle.

After the straps have been secured around the respective parts of the body, the sail is set by spreading the arms in line with the shoulders; to furl the sail, fold the arms or drop them by the sides. Holding the arms outstretched would soon become tiresome, and to obviate this a light stick is often used by the skater. This is placed across the back of the shoulders, and thus a support is found for the arms by grasping the ends of the stick in the hands. The skater steers with his feet, and varies the angle of the sail presented to the wind by changing the positions of his legs and arms. This rig presents a novel and grotesque appearance as the skater flaps his "wings" about in executing various evolutions.

One of the best of the single sails is what is known as the "Cape Vin-

cent rig." The frame for this consists of a long spar, sometimes ten or more feet in length, and a crosspiece or sprit. The sail is triangular in shape, and its longest side is securely fastened to the spar, which should be of strong but light wood, and only slightly longer than its side of the sail. The sprit may be of the same material as the spar, but is usually only about one-third as long. One end should be shaped so as to form a crotch or U. The other end is secured to the corner of the sail that is opposite the spar, and the sprit should be of such length that when sprung into place at right angles to the spar, and with the crotch fitting around the latter, the sail will be stretched taut. The spar rests on the shoulders, being grasped by the hands on each side, and the sprit rests against the skater's back. It has been stated on good authority that with a large sail of this variety, and under favorable conditions of wind and ice, a speed of more than seventy-five miles an hour may be attained.

Of the double sails, the "Northern rig" is perhaps the most easily manipulated, and in many respects it is superior to the cumbersome single sail. One of its most desirable qualities is that it does not obstruct the view of the skater in any direction, and he is thus able to avoid other skaters and obstacles. The main spar is double, and is usually made of spruce or bamboo, though cane fish-poles will answer the purpose. Two pieces of about the same diameter, each ten feet in length, are placed side by side, with the butt of one and the small end of the other together. The ends of these pieces are then securely lashed together with fish line, fine wire or other small but strong material. Two pieces of cane, about four and one-half feet in length, form the two yards, or cross-pieces. Each of these is fitted with a small cleat, lashed firmly at its middle point. Small metal knobs, or buttons, are fastened to each end of the cross-yards and the main spar. The two sails are each four feet square, and, in addition to having wide hems, should be bound with strong tape; the corners should be reinforced so as to be extra strong.

At each "clew," or corner, sew a small metal ring or a loop of strong cord or tape, just large enough to go over the metal buttons on the spars. First, secure the sails to the cross spars by slipping two diagonally opposite clew rings or loops of each sail over the buttons on its spar. Spring the two parts of the main spar apart, near the middle, and, inserting the cleats of the yards, slide them along until one is about two feet from either end of the main spar, and the yards are at right angles to it. Fasten the outside clew of each sail to the button on its end of the main spar, and secure the two inner clews together with a strong cord.

The sail is now ready for use. The main spar is grasped in the hands and may be held either behind or in front of the body. Ready-made skate-sails may be bought, which have jointed spars fitted with brass ferrules, and can be packed in a very small space. The sails are often made of bright-colored cloth, and are fitted with gay pennants. When to these are added suitable costumes, the skate-sailer presents a picturesque and attractive appearance as he tacks, wears, and executes various other maneuvers of an ordinary sailboat.



## ROLLER SKATING

THE pleasure of ice skating has its natural limitations. Of necessity it is, and ever must be, chiefly confined to the more northern latitudes. Only at the extreme north do climatic conditions afford the opportunity to enjoy this exhilarating sport more than a few weeks in each year. In many of the states of the United States this is often reduced to a few days, and in some of them it is quite unknown. Few persons who live south of the line of Pennsylvania and Ohio, know anything of skating except as a theory. In the large cities, nature has been supplemented in some degree by artificial rinks; but only a few can enjoy the privilege thus afforded, and at best the manufactured surface, within narrow bounds, and covered with a swaying throng, is a most unsatisfactory substitute for the long sweep of lake or river, where the skilful skater may find pleasure without limit, breathing the keen, crisp air, in the winter sunlight, or "under the quiet stars."

Many years ago, in the effort to provide young people with a substitute for the genuine article, the "parlor skate" was introduced. Instead of runners, the bottom was fitted with small rollers, by means of which, after a probationary term of practice, with a due proportion of falls, a fair degree of motion, on a smooth floor, could be attained. It served well its purpose as a toy to divert the children, but was long considered to be nothing more than this; it was too juvenile to attract those of more mature years. But from it, in the fullness of time, was evolved the regular roller skate. This was constructed on scientific principles, with a certain flexibility to the device by which the front and rear groups of rollers were attached to the body of the skate, similar in its operation to that of the trucks under a railway car. Thus improved, its possibilities were limited only by the skill of the ambitious skater, and it quickly bounded into popularity. During the '70's, roller skating became a craze. Rinks were built in all the cities and large towns, and night and day they were thronged with skaters, of both sexes and of all ages. The rinks were in full blast during the entire year. While the roller craze lasted, the demand for skates was so great that a dozen manufacturers were unable to supply it. But it was of brief duration. It fell away as quickly as it had burst into being. Everywhere the deserted rinks lapsed into decay or were converted to other uses. Now the roller skate has been relegated to its former place in the world of sports, as a toy for the amusement of children. But the joys of ice skating, like Tennyson's brook, will "flow on forever."

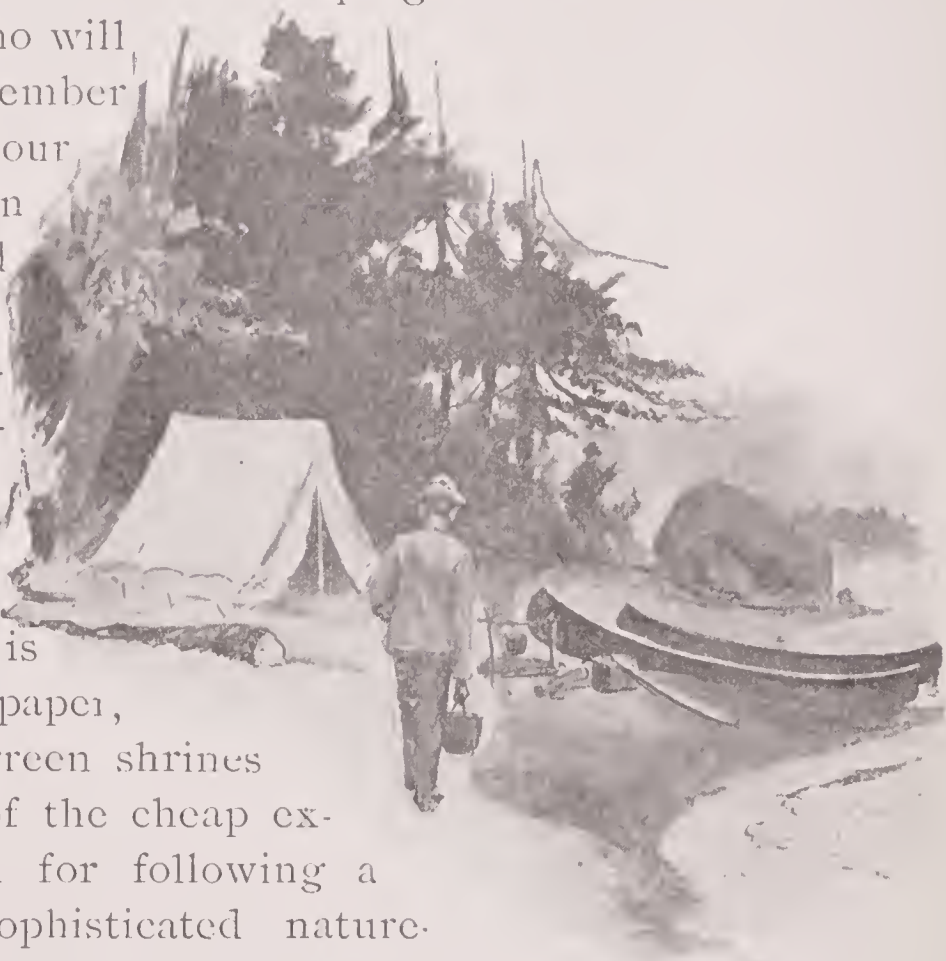
## CAMPING

## SUGGESTIONS ON THE BEST FORM OF OUTING

*By CHARLES G. D. ROBERTS*

THE object of an outing is a return to nature. Antinous-like, we renew our strength when we touch our Mother Earth. During the greater part of the year we are living at high pressure; at a pitch of activity, in one form or another, exhausting to body, brain, and spirit. The forces of modern civilization and progress are the Hercules with whom we strive, and who will never defeat us so long as we remember where to turn for the renewal of our powers. To most of us the realization of our need comes but blindly; and therefore we find a hundred forms of outing which but awkwardly and imperfectly fulfill their office. Nevertheless, we are Autochthones all, however harsh conditions may have obscured our parentage; and the noisy mob which, on holiday or festival, is wont to desecrate with wrapping paper, broken bottles, and rude hilarity, the green shrines of every forest temple within reach of the cheap excursion, is no less to be commended for following a sacred instinct than is the more sophisticated nature-worshiper who pursues his cult in the most inaccessible and exclusive of wilderness retreats. The mistakes, the deficiencies, the loud vulgarities, indeed, that accompany the outings of so many summer excursionists, are matter for sympathy, not for scorn. Those who see but dimly must be expected to stumble, as they grope their way back to nature.

The form of outing about which I am now speaking is that which, of all its kind, takes one closest to the heart of earth, admits one nearest to nature's intimacy. The camper who knows how to go about his camping earns before all others the freedom of the wilderness. He is the real initiate of flood and forest. It is his eyes that are purged with the dew, his feet that take hold with new strength upon the naked earth, his hair that revivifies in the sun, his spirit that is cleansed by the free winds, while he sloughs the winter skin of fret and solicitude. It is he who best learns to realize that—





“Leisure in the sun and air  
Makes the spirit strong and fair;  
Flaccid veins and pallid features  
Are not fit for sky-born creatures.”

When I speak of camping out, I do not mean to include within the term what is known as the “house-camp.” The pseudo-civilization of the house-camp, “with all modern conveniences,” is but a bit of suburbia violently transplanted to the wilderness. As a rule, it is built like a flimsy, but more or less luxurious, summer cottage, crowded with guests, and ruled by a tyrannous alliance of domestics and conventionality. Except for bad roads, pungent, woodsy smells, strange bugs, an occasional far-off peal of loon-laughter, and perhaps a devoutly credited rumor of bears in the neighborhood, one might almost as well be at any fashionable summer resort. Custom still holds sway. Nature is still held at arm’s length. She may peer curiously in at the windows, but she sets no foot across that alien threshold. The house-camp *may* offer something better than the fashionable summer resort; but it is a makeshift at the best, and at the worst, a desecration.

#### THE INLAND CAMP AND THE CAMP BY THE SEA

THE personality, so to speak, of the camp that sits by the seashore is very different from that which inhabits the intimate seclusion of the forest, companioned by inland lake or unfrequented stream. The seashore camp has its own characteristics, — wide horizons, splendor of sunrise and sunset, the impulse and inspiration of great winds, the enfranchising vigor of alternate storm and calm. The camp by the sea is best, perhaps, for those who carry with them the burden of an inordinate egotism, or the torment of a too-persistent introspection. The sea is a masterful reducer of self-conceit, and in its presence we cannot long be blind to our own comparative insignificance in the scheme of things. But the bigness of it is uncomfortable, daunting, overwhelming. What we return to nature for is not to be taught our place and chastened into humility, but to be recreated, and to have new strength breathed into vein and nerve for the battle which we must all of us fight with life. At the inland camp, our intercourse with Mother Earth is more tender and confidential. In these kindly wilds, where one can be secret, and shy, and elusive, curling up in one’s nook like the squirrel in his nest, to look out on the quiet world of leaves and shadows, or hiding in the willow-thicket like the deer, to watch with wide, still eyes the passing foam and sparkle of the river, — in these kindly wilds, I say, nature is more

tolerant and more personal. She lays aside her austerity, becomes indulgent to our whim, and gives to each according to his needs. It is the inland camp, therefore, that meets most perfectly the imperious cravings of those who would medicine their weakness by a summer outing; and it is the inland camp that is referred to throughout this paper.

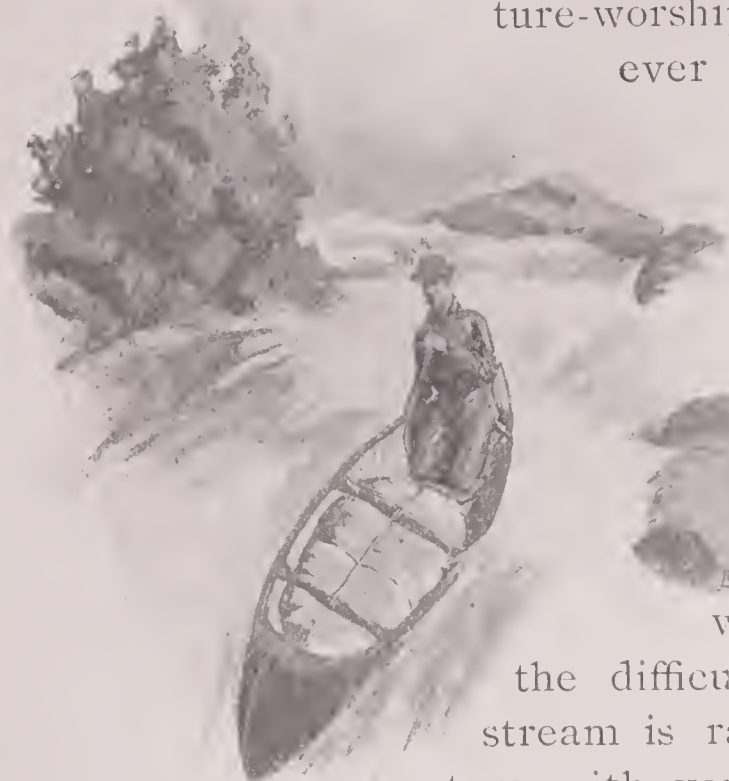
## THE CAMP STATIONARY OR THE CAMP ITINERANT

WHEN one has elected to camp inland, there is yet another point to decide upon. Shall the camp be stationary or itinerant? The one offers ease, tranquillity, acquaintance with the furtive life of the neighborhood, and the opportunity to strike root into the soil. There are many of the secrets of nature which she positively refuses to disclose until you rest long in one place, become an accepted part of the environment, and quite divest yourself of the scent of the stranger. The moving camp, on the other hand, gives the stimulus of exercise and purpose, the zest of ceaseless variety. When each day means a new journey, each night a new camping-ground, one lives a more exterior life, taking in impressions more abundantly, but assimilating them less thoroughly. To the itinerant camper, all experience is primarily physical. His senses are kept lightly occupied with objects that succeed each other without much time for close scrutiny. He has no time to think. He works with joyously responsive muscles, eats with huge and healthy appetite, sleeps deeply and with no care for the morrow, and grows simple and unconsidering as a wholesome child. Life at the stationary camp, on the other hand, is less strenuous and more contemplative. One sinks into his surroundings, and absorbs wisdom unawares. There is enough exercise and labor to keep the physical side of life vigorous, but not enough to make the body swamp the mind. The material is not all, for the spiritual, too, has a chance to play its part. There is time to think, to feel, to dream, as well as to do. One adjusts himself softly to new relations, and gathers a variety of riches unattainable by the hurried though happy itinerant. Each camp, indeed, the itinerant and the stationary, has characteristics and qualities which the wise camper cannot willingly do without; and each, if possible, should have its share in the camper's scheme. But if a strict choice must be made, the weight of argument will be found, I think, to lie with the camp which takes a local habitation and surrounds itself with leisure to be wise.

The itinerant camper travels by boat or canoe, as a rule, though sometimes a sturdy horse and wagon, in a country where roads are wide and farms are few, may lend themselves not ungraciously to



the happy vagrant's need. But in most cases, it is the canoe; and there is no room for argument as to its unassailable supremacy. In fact, the camp and the canoe are twin servitors in the temple of nature-worship; and no camp, stationary or itinerant, can ever seem quite complete without a canoe turned over in the foreground.



If the camp is to be a moving one, served by the canoe, then the route should first of all be carefully chosen. The canoe or canoes (two persons to each canoe, preferably) should take the water somewhere near the head of an interesting, unfrequented, and easily navigable watercourse, so that the current shall be with the traveler all of the way. Unless the canoeist be a past-master in the difficult art of poling a canoe, a long journey up stream is rather heartbreaking work. Better to have nature with you, not against you. In paddling with the current, there is work enough to flavor holiday,—especially if such waters be chosen as afford the excitement of a rapid here and there, with uncertain shoals and eddies to keep the voyager alert. There is no more tonic stimulant to nerve, muscle, and wits, than the running of a good rapid, where disaster is the sure penalty of not doing the right thing at the right instant. A river that connects a chain of lakes, with diversified scenery, diversified fishing, rough water and smooth succeeding each other, and here and there, at long intervals, a settlement or a cabin whereat one may renew the more perishable of the camp supplies, affords the ideal conditions for the itinerant camper. Nature, indulgently provident for her favorite devotees, has scattered such conditions pretty lavishly over the northern section of this country. I have in mind one such route in particular, which combines all fascinations for the canoeist. It is the route of the Squatook Lakes, in the high and wild plateau where the boundaries of Maine, Quebec, and New Brunswick, come together. At the little town of Edmundston, on the upper St. John, flows in the amber current of the Madawaska, draining the Temiscouata Lake basin of Quebec.

A journey of fifteen miles up the Madawaska, by poling against a strong but unobstructed stream, brings one to an easy portage of about two miles and a half; and then the canoes take the water on a shallow, desolate pond called, not unjustly, Mud Lake. The specialty of Mud Lake is its leeches, and one does not bathe there. Its bleakness whets one's taste for the beauty that comes after. The

outlet of Mud Lake is Beardsley Brook, which leads the canoes into the varied and lovely Squatook River, with its succession of lakes, its swift current and usually clear channel, its changing shores, its abundance of enticing spots for the nightly camp, and its unfailing supply of trout for the camp-fire cooking. The Squatook River empties into the Tuladi Lakes, whence the Tuladi River conveys one, not without violence, into the broad expanse of Lake Temiscouata. A half day's paddling down the Temiscouata and one finds himself again upon the current of the Madawaska; and the run back to Edmundston is all too swift and easy. In this circle of perhaps a hundred and odd miles there are but two serious obstructions after passing the portage to Mud Lake. At the First Falls of the Squatook, one makes the portage of a couple of hundred yards, and at the Tuladi Falls, a rougher portage of a quarter of a mile. But both these falls may be run by the skilled canoeist (who takes the precaution to survey them beforehand) unless the water chances to be phenomenally low.

For the camp stationary, the site must be chosen with care and manifold provision. It should be far enough from the haunts of men, and sufficiently difficult of access to secure it against the burden of uninvited guests; yet, generally speaking, near enough to traveled ways to make it possible for the elect, congenial few to visit it. Its approaches, in a word, should have obstacles enough to act as a sieve. The wrong person is nowhere more wrong than when he intrudes himself upon the homogeneity of a well-harmonized camping party; but to such a party, the fitting visitor may bring new zest, opening everyone's eyes afresh to the delights of the situation. Moreover, it is a great advantage to have a settler's cabin, or a little backwoods farm, within a mile or two, where to buy eggs, fresh milk, vegetables, and other perishable supplies. Such a little neighbor to the camp is never obtrusive, but may become most useful in case of a sudden need to communicate with civilization.

The nature of the locality chosen for the camp should be such as to permit as much diversity of interest as possible. Needless to say, the camp must be by water. Wild nature in the summer time is not half herself without abundance of open, living water. Let this water be a lake of size not too great to be companionable, or the embayed cove of a bigger lake; or else a river large enough to be ruffled and spacious, yet not so large as to become impersonal. A quiet, amenable water is what the camp requires, where boat and canoe can launch or land in all weathers, where swimming invites, and where washing, and such trivial duties of camp life, do not seem an affront to the powers of silence. If there can be added a small brook or rapid little



river emptying itself near by, very great is the addition. There is no music that so becomes a summer camp as that of running water, no music that so effectively lures one's spirit out of the commonplace and off into the realness of dream. Also, there should be an ice-cold spring close at hand, for drinking and to cool the larder, unless a little river flows near by—one of those mountain streams which keep their coolness and sweetness even through the dog-day droughts.

The site for the camp should be a level patch of ground, beyond suspicion as to its drainage, and high enough above the water to escape the low-lying mists. It should be inclosed by the forest on the back and sides, but well open on the front to sun and wind, for the sake of unimpeachable sweetness and the effective banishing of damp. The exposure should be southerly, for sunlight is health; and shade is plentiful enough when wanted. It is the cheer of nature, not the gloom, that the camp demands.

It may seem to the inexperienced and the enthusiastic as if these requirements were too many. But for the camper there is no time better spent than in searching out the exact, predestined spot for the camp. The search is fascinating in itself, leading one to the loveliest scenes, and affording continual suggestion. But the searcher should be firm, and demand all. He should be hard to satisfy. The delight of camp life is made up of little things, and it is greatly worth while to avoid the petty avoidable discomforts. Let the site of the stationary camp be nothing less than the very best available. The kind of camp,—for camps are of many forms and characters,—will be discussed in another section.

### THE CHUP-LAH-QUAH-GAN

IT MIGHT naturally be supposed that the first requisite of a camp is to provide shelter, and that, therefore, the first thing to think of is a roof. It is not so, as the truly initiated well know. The first requirement of a camp is a center, to enable the camper to dif-

ferentiate for himself a little personal holding from the vast unchartered spaces of the wilderness. Such a center, such a differentiation, is supplied most speedily and effectively by the camp-fire. Where the camp-fire is, there is the camper's lair. With a log or a tree trunk at his back, and ever so little a fire at his feet, he feels at home; he has the natural dignity of a man with a habita-



tion; he is not a lonely derelict in the wilds. The symbol of the camp-fire is the forked stake of green sapling which is driven into the ground so as to slant across the flame. Upon this forked stake the camper slings his pot. It is called among the Indian tribes by the musical name of the *Chup-lah-quah-gan*.

The Indian makes no big, wasteful fires. In his blood dwells the remembrance of the days when a big fire might reveal him to his enemies. Moreover, the little fire does its work better, costs less labor, and does not endanger the forest. The little Indian fire is the more companionable. You can gather closer about it, light pipes at it, fuss with it and control it; while the big fire, with all its cheer and the splendid picture it makes upon the night, is likely with every changeful gust to become a scorching tyrant. Furthermore, one cannot cook at a big fire. The big fire is, in fact, a bonfire, not a camp-fire. It has its place, of course. At the stationary camp it adds picturesqueness and supplies evening diversion. There is fascination in feeding the ravenous and magnificent monster. By all means, let the stationary camp have its bonfire; but let it not be confused with the camp-fire, and let it be firmly taught to know its place. This should be at a safe distance from the camp, at a safe distance from inflammable trees and underbrush,—on the beach close to the water-side, or on some rocky promontory where its roaring and soaring riot of beauty may not start a conflagration. The camp-fire, then, is such a one as can be rightly symbolized by the *chup-lah-quah-gan*, which leans above it without being devoured. It is the fire to cook by, to hug, and to moderately and safely light the camp with.

For the camp itinerant, the *chup-lah-quah-gan* fire in its simplest form is sufficient. It is best built between two flat-topped stones or two small pieces of log, for the better draught, for continence of fuel and heat, and for convenience in supporting such cooking utensils as may be used. The very first thing to be done in pitching camp on a journey is to get the camp-fire started and the water on to boil. Only then comes the secondary concern of shelter,—be it tent, brush lean-to, or bivouac under the upturned canoe.

With the fixed camp, however, the fire is a matter for careful thought. Its situation must be chosen with an eye to the prevailing winds; it should be as near to the camp as is consistent with safety; and so placed as to throw its enlivening radiance into the sleeping-bunks. Upon its proper location and judicious construction, depends much of the comfort of camp management.

There being more luxury in the fixed than in the itinerant camp, there is more cooking to be done, and the single *chup-lah-quah-gan* is likely to be insufficient. In such a case this tutelary deity of the camp-fire



takes on a new form. It expands to two forked stakes, planted upright, with a cross-stick of green sapling running horizontally over the fire. From this, the fire being built to fit, several pots can be suspended at a time.

And now for the fire itself. Let this be no haphazard structure, but a work of skilful devising. Cut two green logs, eight or nine inches in diameter, and four or five feet in length, and lay them side by side, about four inches apart at one end and twelve or fourteen inches apart at the other, on the spot chosen for the camp-fire. Let the wider opening between them face the camp. Hew the top surface flat,—and there is a thoroughly manageable out-door kitchen-range, with all the advantages of an open fire. Along between these logs the fire should be built of small kindling and short billets. As soon as a good bed of coals is formed, cooking at this improvised range becomes the simplest affair imaginable—for one who knows how to cook. *Chup-lah-quah-gans*, one or several, may lean over it with their swinging burdens, while saucepans and frying pans find a secure position on the flat-topped logs, with the hot coals close beneath them. Where the space is narrowest, there perches safely the smallest skillet; and where it is widest is built up the most abundant fire for boiling the pot. The logs, of course, should be green wood, full of sap, in order to last as long as possible. Pine, ash, and birch, should be avoided, as these burn freely even when green; but spruce, hemlock, butternut, and chestnut, will be found to resist the fire stubbornly. A camp-fire of this pattern gives the very best results, with the least squandering and scattering of fuel. It may be banked and kept in for hours without tendance, and it is readily fed up to a blaze when illumination is demanded; as for the fuel, there is usually no lack of well-dried windfalls to be cut up for the purpose, and the young birch, chopped short and split, burns green or dry, while the bark of a dead hemlock makes the handiest and hottest of fires.

### CAMPS AND THEIR KINDS

AT THIS point it is perhaps well to say a word about "roughing it." There is no virtue, and very little fun, in being unnecessarily uncomfortable. Those harsh deprivations which hunter and trapper so often endure, they endure because they must. They are not an end in themselves—though they make an end of many a fine enthusiasm. They are by no means essential to a sincere "return to nature," but rather, a serious obstacle to it. It is through such that nature so often gets herself seriously misunderstood.

The first thought of the inexperienced, to whom the idea of camping out presents itself merely as an escape from the treadmills of convention and a plunge into the coolest pools of peace, is that these desired consummations will be best attained by an uncompromising course of "roughing it." Only let them get into the greenwood, and they dream that their utmost needs will be compassed in food for a hunter's appetite, and a place, preferably dry, to lie down upon. In such a panic of enthusiasm they go, ignorant and unequipped, to join the hearty fellowship of the wilderness. The first evening in camp,—in spite of burnt supper, boiled tea, and smoke that blows nowhere so freely as into the camper's eyes,—is a carnival of song and strange exhilaration. But mosquitoes, black flies, and those infinitesimal pests, the sand-flies,—*bite-um-no-see-ums*, as the Indians call them,—are playing their games steadily, and toward bedtime enthusiasm is on the wane. The forest floor, imagined as a deep, fine-scented cushion of yielding moss, proves to hold a hummock or knot for each several bone of the weary body. Level as the ground appeared, strange and incalculable undulations develop themselves. Sleep refuses to come until near daybreak, if at all; and then the awakening is to a state of puffed faces, aching joints, and such general disillusionment as may send the party back to town with execrations on their lips.

The journeying camper should carry a tent with him. If it were always fine weather, then the light lean-to of brush, facing the camp-fire, would be sufficient; or even, when the day's journey had been long and journeyers were weary, the canoe, turned up on its side, would afford enough shelter for the night. But fine weather we have not always with us; and for the camper, to be wet is to be miserable. The joy of an outing is in its weakest joint.

Be ready for the worst, and take a tent. Of course there may be occasions when a camper wants to go without a tent, or when it is not possible to get the right kind of tent. Then a well-constructed lean-to will give satisfaction, indeed,—but the building of it takes time. A ridge-pole and two uprights will, of course, constitute the framework of the structure. One saves trouble, and gains stability, by taking a large tree as one of these uprights. A crotch, or hole, or a deep cleft in the bark, five or six feet from the ground, will serve to support one end of the ridge-pole. Unless another tree with similar





conveniences happen to be growing just seven or eight feet away, one must plant firmly in the ground a forked stake, to form the other upright. The ridge-pole should be tied firmly in its place. Then long, trimmed saplings should be leaned against the ridge-pole, at such an angle as to have a floor space of six to eight feet depth, according to the accommodations required. The slanting roof must be thatched thickly with branches, hemlock by preference, laid on in courses, butt upward, beginning at the bottom, and finishing at the top with another pole tied firmly over the last layer of butts, to keep the whole thatching in place. A thatch of hemlock, laid in this fashion, will shed a very heavy rain for one night. The open ends of the lean-to may be closed by upright stakes interwoven with hemlock branches. The front, of course, remains open to the cheer of the camp-fire. A little modification, such as deepening the thatch and partly inclosing the front to keep out driving storms, may transform such a lean-to into a more or less permanent camp, not, of course, adapted to long occupancy, but a very good thing to return to from time to time—a waterside caravansary for the canoeist.

The requirements of the tent are that it be light, not bulky to store in the canoe, simple to pitch, and waterproof. The most convenient, all things considered, is a small ridge-pole tent of strong cotton duck, with drop curtains at the sides, allowing about two feet of space between the floor and the bottom of the eaves. The ridge-pole should be fully six feet six inches above the floor. The depth and spread will of course be apportioned to the number of the party to use it; but as a rule, a depth of seven feet with a spread of six will be found convenient. Such a tent, if light duck, will fold into small space and slip handily under the fore or aft crossbar of the canoe so as to form a comfortable seat for the paddler. It is fitted, of course, with guy-ropes and stays; and notched and pointed tent-pegs should be carried with it. To have these ready saves much time and fussing; and they take up little room in the canoe. The ridge-pole and uprights may be cut at any camping place where saplings abound; and a spot without saplings is not likely to be attractive as a camping place. The ridge-pole must be straight and smoothly trimmed, so as not to injure the roof by uneven strain; but almost any forked stakes will do for the uprights. The front flaps should open full width, fronting the camp-fire, and they should be kept tied back all night. More than half of the good of the woods life is lost if one sleeps in a closed tent, shut off from the benign air and mystic influences of the forest night. Of course, the itinerant camper must usually count upon having some annoyances of flies and mosquitoes, as some of his camp-grounds are sure to be infested. But fly-medicine is better and

more wholesome than a sealed-up tent, as a protection against these pests. Of this fly-medicine I will speak further on.

The prime essential of the tent, as I have said, is that it shall shed the rain adequately. The best of tents, unless made of canvas so heavy as to be intolerably burdensome in traveling, is not so waterproof but that it will bear to be more so. That veteran camper, "Nesmuk," in his delightful little camper's handbook entitled "Woodcraft," gives the following recipe for waterproofing the tent material. I have found nothing better for the purpose. "To ten quarts of water add ten ounces of lime and four ounces of alum; let it stand until clear; fold the cloth snugly and put it in another vessel; pour the solution on it and let it soak for twelve hours; then rinse in lukewarm rain-water, stretch, and dry it in the sun." Cotton duck treated in this manner has its capability of shedding water more than doubled.

For the stationary camp, such a tent as I have described, but of more generous proportions and more substantial make, will give excellent results. But as a safeguard against prolonged storm, those persistent, driving rains which get through the tightest canvas, it should be provided with a "fly" or false roof, spreading from the ridge-pole at such an angle as to lie at least two feet above the roof proper, at the eaves. This shelter roof is in reality a sort of umbrella to the camp, and may be of very light material. It must be securely stayed, however, or a sudden great gust swooping under it, will tear out the guy-ropes and carry it off in a white flutter over the tree tops.

But there is a modification of the ridge-pole tent,—a sort of hybrid between tent and log-cabin, which makes the ideal camp for comfort. Let me, from my notes of a successful outing, describe the establishment and construction of such a camp. Its location was on a wild lake, one of the Aylesford chain, in the heart of Nova Scotia. The time of year was late August and September, at which fortunate season mosquitoes and black-flies largely withdraw themselves from the woods of Nova Scotia and New Brunswick. Our party consisted of ten, men and women. We chose this particular lake for reasons already mentioned. It was thoroughly secluded, having but a single squatter's cabin on its shores, and that a good half mile back from the water. That cabin meant milk and eggs for us. The lake was reasonably accessible. A drive of fifteen miles from the railway, over an excellent road, took us to within six miles of its shores. Those remaining six miles were traversed by a passable wood-road, leading to a delightful beach of silver sand at the foot of the lake. The wood-road was bad enough to prove an effectual barrier to the bicycle-tourist and the picnic party; but it was no serious obstacle to



our strong express wagon, or to the huge extension farm wagon which carried our boat, canoe, baggage, and provisions.

Arriving at the lake about midday, we pitched tents for temporary use; lunched, and devoted the afternoon to exploring the lake for a camping-ground. The wide circuit of the shores was exquisitely diversified, — now high, now low, here naked rock, there wooded to the water's lip, and yonder fringed with beach of dazzling whiteness. All the rock about Aylesford Lake is a light-toned granite. Where the age-long, stealthy depredations of wave and rain and wind have worn this rock away, only the hard white crystals of the quartz are left, and these are hoarded in silvery drifts at the head of every cove. Where it shoals upon these beaches, the brown water turns to gold, and the lure to the bather is irresistible.

What we sought was an island near the shore, wooded with well-grown timber, with a sheltered cove as a landing-place, a silver beach for bathing and the picturesque bit of level for the two camps. What we found had all these attractions, with others added unto them. It was a narrow crescent, with three coves and three of those delectable beaches, so that we had at least one haven of windless calm secured to us in all weathers. The island was diversified by two little hills; it carried so many different kinds of trees as to be a very epitome of the forest; and it was simply brimming over with ripe huckleberries. It had two ice-cold springs, — and on the shore, two hundred yards away, flowed in a lively brook, with promise of trout and performance of music.

On a plateau, high, but close to the water, we cleared spaces a few yards apart for the two camps, with a little alley of greenery connecting them. Having leveled the ground, removing roots and stones, and filling in all unevennesses with close-packed moss, we returned to the tents at the foot of the lake, planning to move early on the morrow and to get established before night. In the morning we breakfasted while the sun was yet low, packed supplies into the boat and canoe, loading them to the gunwales, and migrated to the delectable island. There we set about building the women's camp.

Selecting hard-wood trees, birch and poplar chiefly, on account of their freedom from sticky balsam, we chopped a supply of logs from six to eight inches in diameter, and built an oblong pier fourteen feet long by ten in width, with a spacious doorway in the end facing the water. Needless to say, we had brought, besides our axes, a handy tool-chest, with plenty of spikes and nails. The stationary camper has this advantage over the itinerant,—he does not have to deprive himself of conveniences in order to travel light. The logs were carefully matched to fit into each other at the corners and hold

securely. The walls thus built were about four feet in height. As the men erected them, the women occupied themselves by "chinking" the crevices with moss to keep out the wind. Over these walls we raised a ridge-pole tent such as I have already described, of dimensions to allow the eaves to project fully a foot beyond the walls, keeping out the rain and leaving space for perfect ventilation. A canvas curtain, always pulled back except in case of driving rain from the south, was hung at the doorway. Down the middle of the floor ran a smooth log, fencing off a space to be filled in to the depth of a foot with picked hemlock and balsam fir, making the most luxurious of sleeping-places. The other half of the floor space was tramped hard and swept clean. Pegs were driven into the logs, and lines strung this way and that way under the roof supplied room to hang things out of the way to avoid confusion. A tiny but water-tight tent of tarpaulin beside the door served as storehouse for our provisions. As for the men's camp, it was a mere dormitory, and a small tent sufficed for that. We lived in and about the women's camp.

Once settled in these quarters, we were independent of the weather. When it stormed we lay reading, smoking, tying trout-flies, scribbling, or doing mysterious things with thread and needle, in unalloyed comfort, while the wind rushed through the trees and the lake-waves roared finely on the beach below us. When it was fine,—as it usually was at Aylesford Lake,—we went exploring the winding shores and innumerable islands, gathering water lilies, fishing in the cold streams that fed the lake on every side, or swimming in the silver-sand coves. As for the blueberries and the huckleberries, the supply of them was inexhaustible, and we almost lived on huckleberry duff. Their abundance brought to the island countless squirrels, Canada jays, robins, and thrushes; and these wild creatures, observing that our shotguns were never fired and that our manners were not ferocious, became almost familiar. Even those cautious birds, the loons, so far overcame their reason, in time, that they would play and scream and call in the moonlit water immediately below our bluff, within easy pistol-shot. When we left the camp on Aylesford Lake, we carried away the memory of a perfect outing; and we flattered ourselves, also, that we left behind us a good reputation among the furred and feathered citizens of our island.

#### AYLESFORD LAKE

ALL night long the light is lying  
Silvery on the birches sighing;  
All night long the loons are crying  
Sweetly over Aylesford Lake.



Berry-copse and brake encumber  
Granite islands out of number;  
All night long the islands slumber,—  
But my heart is wide awake.

Listening where the water teaches  
Magic to the shining beaches,—  
Watching where the waveless reaches  
Hold communion with the sky,—

Soon my spirit grows serener,  
Hearing saner, vision keener.  
In the night's benign demeanor  
Peace and wisdom venture nigh.

### BEDDING AND CLOTHING

NEXT in importance to the camp-fire is, perhaps, the camp bed; for it is only the seasoned backwoodsman who can sleep comfortably on the hard ground, and he won't do so unless he has to. To get up with aching joints is a poor preparation for a day's delight. Whatever the shelter, then,—be it upturned canoe, lean-to tent, or elaborate camp,—let the sleeping-place be well prepared. First, remove every knot, root, stone, or hillock, and fill in every awkward little bottom with sod or hard-packed leaves. Then make the bed. Let it be, if there is time, a foot depth of picked balsam fir and hemlock twigs,—the best of all bedding. Failing this, or lacking time, dry moss and green bracken make a substitute for a night or two; but let there be plenty of it. It is better to take an hour longer in the preparation of the bed than to scamp the job and then toss sleepless half the night. In the stationary camp, the bunk should be made as described in the preceding section, and filled in with the finest pickings of hemlock and fir. On this luxurious divan, each camper has his own space allotted, and makes his bed there according to personal preference. One will roll himself in a blanket, of weight suitable to the season; another will crawl into a blanket sleeping-bag which leaves just his head sticking out. For my part I prefer the freedom of the loose blanket; but in chilly weather, and for a lethargic sleeper, the sleeping-bag doubtless has its advantages. Under all ordinary circumstances, it is well worth while to undress at night. At the stationary camp, there is no reason why one should not have the wholesome luxury of pajamas. At the camp itinerant such things are just so much more to carry and should be left at home; but in that case, change into the extra shirt and drawers for the night. You will get more refreshment, more renewal out of your sleep; you will have your day clothes fresher to put on in the morning; and the oftener each day

you can get your body naked to the sweet air and tonic light, the better for that body's health. Nature does not greatly love clothes.

Another adjunct to the camp bed that should not be forgotten is the pillow. One has to be very tired, indeed, to sleep well all night with a boot leg or a pair of shoes under his head. In the absence of a pillow, stuff your coat with moss and twigs, and you have a tolerable substitute. But there is no reason why one should not always have a pillow. A little bag of cool, light cotton may often prove useful for carrying loose articles that may get mislaid; but when empty, it takes up little more room than a pocket handkerchief. Stuffed with fir-twigs and moss it makes a pillow fit for an empress, one that will distill tonic savors and spicy dreams into your breathings all night long and work miracles of healing upon sensitive lungs.

In regard to clothing, the inexperienced camper is apt to think it must be of some massive woolen stuff, to defy time and blizzards. One's clothing on a camping trip should be just a little heavier than one's ordinary wear. It is best to make the adjustment through the medium of the underwear, and to let the coat and trousers be of light weight, but *strong*, tweed or flannel. Let the shirt, too, be of light-weight flannel. One coat is enough, but carry an extra shirt, an extra pair of trousers, an extra pair of socks, extra shoes, and an extra suit of underwear. The shoes should not be so heavy as to be a burden in tramping, and top boots are absurd in the woods, as well as a nuisance. Go lightly shod, but strongly. Better far the flexible Indian moccasin than the clumsy and burdensome high boot. Have shoes with low heels; medium soles are the best. Wet feet are not a calamity in the camper's eyes. For the head, a cloth cap or a soft felt hat, but not straw. In general, let all the clothing be of soft, neutral grays or browns, that will harmonize with the wilderness coloring and not frighten the wild creatures into spasms. If we harmonize our bodily exterior to our surroundings, we will find it easier to attune our minds and spirits also to the forest world. At the stationary camp, where one does not have to consider every additional pound or square foot of "dunnage," it is well to have extra clothing in the shape of a stout overcoat, and extra bedding to the extent of a light blanket, against the contingency of a cold wave or an easterly rain. In the camp itinerant, a light rubber-coat may chance to pay many times over in comfort for the extra space it takes in the canoe.

Under this heading it may be well to speak of sundries which are apt to be overlooked, but which play an important part in the comfort of the camp. That the ax should be a good one, and well



sharpened, is too obvious to call for assertion; but I might suggest that for the itinerant camper a heavy hatchet will give better satisfaction than an ax, for all that veteran backwoodsmen may say to the contrary. No camping expedition should set forth without two hatchets; for lacking its hatchet the camp is bereft indeed, and accidents may happen in deep water.

Then there is the "ditty-bag." This little bag does not take up much room, but it has a fashion of proving its usefulness in unexpected emergencies. The experienced camper will, from time to time, add to the variety of its resources, according to his individual tastes and needs; but from every ditty-bag one should be able to unearth such occasional necessities or utilities as the following: scissors, needles, and strong linen thread, buttons, string, tape, a little tape-measure, paper of pins, lump of shoemaker's wax (wrapped up carefully, in case of heat), sticking plaster, a cork-screw, and other small articles that one never knows the value of till he has to do without them. The ditty-bag speedily becomes popular in camp. Then there should be, not perhaps in the ditty-bag, but associated with it in unexpected usefulness, a bottle of pain-killer or some tried medicine of that class. And no outfit is complete without a few yards of light clothes-line. A stationary camp should also be supplied with a little tool-chest, containing hammer, saw, gimlets, or brace-bits, screw-driver, and assorted nails and screws. But such a luxury is not needed at the itinerant camp.

## FOOD AND COOKING

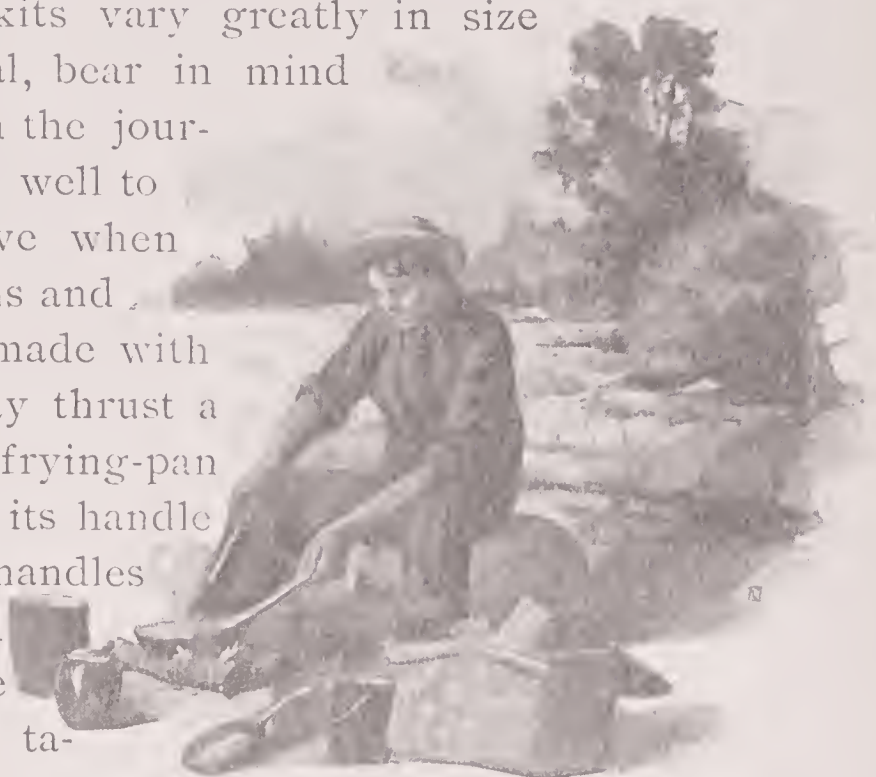
AT THE stationary camp, there is so much opportunity for varying the bill of fare that it seems to me superfluous to offer suggestions. Moreover, among the members of such a camp there are sure to be some who have that genius for cooking which makes miracles possible. All that I have to say on the subject of food and cooking, therefore,—and it is not much, as this department of camp science has never been a specialty of mine,—applies primarily to the requirements of the camp itinerant.

In the first place, the proper camp-fire has been already described. With such a fire, cooking becomes easy, if one has the proper utensils. These are made, to suit all needs, in compact, convenient "kits," which all camp-outfitters will supply. A large kettle of the heaviest block tin has perhaps two smaller kettles fitting into it, on the nest-within-nest principle; together with half a dozen tin plates, a couple of two-inch deep tin pans, a skillet, a nest of tin cups, and at the heart of all, a set of tin cases to hold salt, pepper, sugar, butter, coffee, tea,

and the like, and a compartment of knives, forks, and spoons,—which should be as few as possible. These kits vary greatly in size and degree of completeness. In general, bear in mind that simplicity becomes more precious on the journey than it may seem at the outset. It is well to have the plates of such sizes as to serve when necessary as covers to the two deep pans and the skillet. These, moreover, should be made with an indented socket, into which one may thrust a bit of green stick for handle. The frying-pan should be made in the same way, and its handle renewed at every camping-place. Long handles are an abomination in packing the load into a canoe. As for the knives of the outfit, they should be not the ordinary table knives, but knives that will cut, knives capable of playing many parts in case of need,—in fact, good serviceable hunters' knives.

If one carries along, to hold the provisions, a waterproof tin box, of size and shape to go handily into the canoe, he will have reason to congratulate himself in wet weather or when the canoe is shipping seas. To find the tobacco and the grub water-soaked, at the end of a hard day's journey, is an experience to discourage all but the most indomitable. In this tin box should be a little bag of bran, rice, cornmeal, bacon, lemons, a bottle or two of pickles (to take the place of fresh fruit and salad), good "hard-tack" biscuit, oatmeal, and the reserves of tea, coffee, and sugar, which cannot find space in the "kit" before described. Also, there should be some canned stuff, according to the campers' tastes. Corned-beef, tomatoes, peaches, and green corn have proved to me the most satisfactory. Even the campers' appetites are susceptible to the charm of variety, and if one is on good fishing-waters, the richness of fresh trout or bass fried in pork-fat and cornmeal will soon cloy on the palate. There is one addition to the larder which I suppose will be regarded with scorn by most of my readers, but let none condemn it who have not tried it. To me no camp fare would be complete without *molasses*; and never would I go on any long canoe-trip without a sizable jug of the brown, plebeian syrup, stowed securely in the stern. It belongs to the woods essentially, and blends with the heavy sayors of the camp *menu*. It is strong, wholesome, wild, and primitive,—I speak, perhaps, with the prejudice of my native Canadian backwoods,—indispensable. Try it!

As to recipes for camp cooking, it is not a part of my plan to include them in this paper. If one has had no experience in such fundamentals of camp cookery as the brewing of tea and coffee, the





frying of fish and bacon, the boiling of beans and rice, the preparation of corn-meal mush, the frying of potatoes,—there is sure to be room for a little bag of potatoes in the canoe,—then he should take a lesson or two in these arts at the kitchen range before undertaking the responsibility in camp. If he finds that the instinct for it all is not his, then let him shift the office to a camp-mate's shoulders, before spoiling the tempers of all the party. These fundamentals mastered, then one may go to such elaborate achievements as stews, flapjacks, and even huckleberry duff. For the stationary camp, I can confidently recommend a cooking utensil much favored by the Indian guides of the St. John River,—the old-fashioned "bake-oven" of bright tin. This is, in shape and size, something like the ordinary blower used to start a coal fire in a grate, but deeper, and with two shelves. Set with its open front close to a steady bright fire, it roasts admirably; and a camp equipped with it need not be deprived of the unwholesome luxury of hot bread.

If the camp cook wants to carry with him specific directions and recipes, he cannot do better than take to Nesmuk's little handbook on "Woodcraft," already mentioned. Nesmuk's hints are sensible, practical, and easily followed; and they are in compact form. I know of no more useful guide to the woods than this small book.

#### THE PLAGUE OF FLIES

It is only those who have not really experienced them who prefer to think that flies can be ignored. By flies, of course, I mean the whole biting and tormenting tribe that infests our wildernesses,—mosquitoes, sand-flies, and the small black flies whose cutting bite bleeds so freely that the poison is apt to be pretty well washed out. There is a large fly, called in some neighborhoods the black-fly, but more often the dog-fly or the moose-fly, which, happily, is restricted in its range. Where this fly has its haunts, one does not go camping for pleasure. Its bite raises a sore like a small boil. But in most of our northeastern wilds this pest is seldom seen, and then, by reason of its size, is easily avoided. I do not include this fly under my general heading.

As for the smaller pests, whose terrors depend largely on their numbers, the stationary camp should avoid them altogether. There are plenty of high, well-wooded, clean-watered localities where the mosquito is practically unknown, and where the little black-fly disappears after June. Let such a place be chosen for the stationary camp, and escape all fussing with fly poison and mosquito nets. But the moving camper must expect to traverse many infested neighbor-

hoods. Most of the best canoe routes will take him through an occasional mosquito swamp or low-lying fly-belt. The inexperienced camper, who has faced and endured the mosquitoes which frequent suburban lawns, is inclined to think he has been initiated, if not inoculated, and goes to the ordeal with light heart and unarmored features. The morning after his first real initiation his face will resemble nothing human, his hands and wrists will look spottedly dropsical, and he will be fortunate if he can see at all. Where the flies really hold sway, nobody despises them,—not the Indians,—not even the bears.

The sensible remedy is, of course, fly-medicine. The raw camper looks on this dark, ill-smelling stuff with what seems at first an unconquerable aversion. But if the flies are in force, he comes to it, he cries out for it; and after a time he says that he likes the smell, and finds the fluid softening and helpful to the complexion.

In the backwoods of Maine and New Brunswick, a simple mixture of tar and butter, simmered together to the consistency of thin molasses, is used. This useful mess is not uncommonly known as "slitheroo." It is effective, if used very freely. It must be rubbed over the face, neck, wrists, and backs of hands,—applied often and not washed off at all while within the fly-belt! It gives to the skin a fine gipsy coloring for the time, but is, indeed, a preservative and true complexion balm, however little suited to My Lady's toilet.

But much more effective is the following mixture,—which is in reality just "slitheroo" with the addition of oil of pennyroyal. Five parts of pine tar, three parts of olive oil, and one part of oil of pennyroyal should be simmered together very gently until the blending is perfect. This is not unpleasant to use,—when you get accustomed to it; and the flies do certainly abhor it. Pennyroyal is an abomination in the nostrils of all the fly kindred. Use it freely, and don't wash your face and hands too assiduously, and you will walk unscathed while the hosts of the enemy encompass you.

### RECREATIONS IN CAMP

As I began this article with the premise that camping was in itself the best of all forms of recreation, it may seem superfluous to write this section. Possibly, however, I may be permitted here to regard the word in its collateral meaning of diversion, while elsewhere I give it rather its original sense of renewal or re-making.

It is, of course, only the inhabitant of the stationary camp who has to give thought to his recreations. The itinerant camper's day is all diversion, however laborious it may be at times. But at the stationary

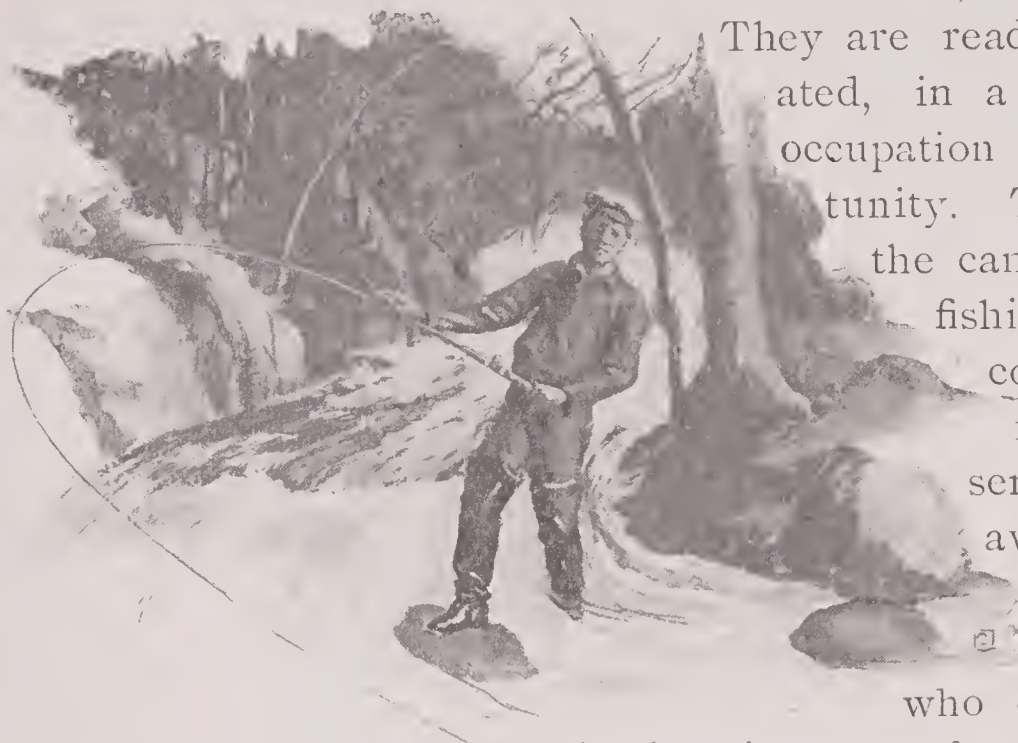


camp there are long, sweet hours of leisure, to be filled or not as one may choose. For the camper who has a fad, and who brings it to camp with him, the question is settled beforehand. But most men and women are not so fortunate, or so unfortunate, as to be fad-ridden.

They are ready to be amused, diverted,—recreated, in a word,—by whatever pleasurable occupation may present itself to their opportunity. The most appropriate diversions for the camper's leisure, it seems to me, are fishing, hunting with the camera—and consistent, deliberate, unapologized-for loafing. Hunting, in its accepted sense, I purposely omit, though well aware of all the fascinations and advantages to be urged for it. Hunting is an end in itself, and those who enjoy it go to the wilderness for

the hunting, not for the camping. The fierce and sanguinary excitement of it seems to me out of key with the camping spirit. We can get closer to that side of nature which is best for us if we go to her without a gun, without the lust of blood in our hearts and in our eyes. But to those of my readers who would join issue with me on this point, I hasten to acknowledge that I am a reformed hunter, and perhaps subject to the fanaticism of the convert. My rifle has been for some years left to rust, since I have learned to dislike killing the wild creatures and have found the greater pleasure in getting to know them alive.

But fishing is another matter. Consistency is the least interesting of the virtues, if, indeed, it be a virtue, and not, rather, the refuge of weak and timid souls. Well did Isaak Walton call fishing the gentle art. It is contemplative, and admits one's spirit to the forest companionships. It lacks the violence and the bloodiness of hunting. In hunting, it seems to me, there is something of the disastrous nature of civil strife. The furred and feathered victims of our prowess are warm-blooded, and akin to us. But the fish are creatures of another element, living in a world remote from us, not in any sense personal to us. All this, of course, is relative; and if any one dislikes to kill even fish, I say to him he does well. His regeneration has gone further than mine, and I honor him. For the present, however, I like fishing,—and for all who think with me, fishing is an ideal camp diversion. Of course the fishing enthusiast goes for the fishing, not for the camping. I do not speak to him in this article. But if the stationary camp have near it good bass or pickerel waters, or, best of



all, an amber stream where the trout lie at the foot of the rapids, ready to rise to a red hackle, in the cool of the morning, or to a white miller, in the first of the purple dusk, blessed is that camp.

Still better, perhaps,—and certainly impregnable to criticism,—is hunting with the camera. All the nicety of woodcraft which forms so great a part of the hunter's pleasure is required in this new art. All, did I say? Nay, many times more—more patience, more subtlety, more knowledge of the quarry. For the camera is no long-range weapon, like the rifle. This is, indeed, a fascinating sport. To excel in it, one must himself become preëminently a portion of the woods, adopting all the methods and tactics of the furtive kindred, and in the end beating them at their own game. One comes to know the wood-folk as in no other way. And the trophies which one wins are practically imperishable.

But above all, in the affections of the true camper, stands loafing. I mean, of course, that true loafing wherein one “invites his soul.” When you loaf because there is nothing else to do, there is little gain to body or spirit. The outcome is merely littleness. The nerves, indeed, are apt to get upon a rack of expectation, or else to sag heavily into *cnnui*. But the proper loafing is a state of happy, receptive passivity, where knowledge and wisdom steal into us unawares, and nature, having her will with us, stealthily makes us over, a little nearer to the heart's desire.

## ROWING

**I**N ADDITION to the fact that Rowing brings into play a great number of the muscles and organs of the body, it is of especial value in promoting a judicious system of training; since to become a good oarsman one must practise long and earnestly in order to master the art, and must prepare his whole organism to withstand a long and severe physical and mental strain. This, of course, applies especially to racing, though in Rowing simply for pleasure, the better one's physical condition, the greater will be his enjoyment of the sport.

Boat building has been brought to such a degree of perfection that a modern boat race is an exhibition of science and skill, instead of being, as in the early days of racing boats, a contest between two badly trained crews, trying to propel by main strength, heavy, unwieldy boats. The standard of Rowing is maintained by the universities and athletic clubs, especially in this country and in England, and though there are slight fluctuations in form from year to year, there is no doubt that speed has been gradually on the increase.



Coaching has become a sensible and scientific form of instruction. Training is now merely a matter of adhering to the common sense rules of hygiene as regards diet, bathing, exercise, and rest; and, as has been said, the building of racing boats has developed into a contest of skill between the different builders, in which as much interest is taken as in the race itself.

### GENERAL DESCRIPTION

ROWING may be defined as the art of propelling a boat through the water by means of oars or sculls, the person or persons operating them usually sitting with the back toward the bow, or forward part of the boat. In Rowing with a single oar, the oarsman reaches forward with the oar in the air, then dips it into the water, and, throwing the body straight backward, dashes the oar through the water, and, finally, completes the stroke by bringing the handle against the chest.

In racing boats, the greater part of this operation is performed with the aid of the resisting power of a stretcher and a sliding seat. Rowing with sculls is much the same, except that instead of the single oar, the sculler uses a pair of sculls, one in each hand. A boat may be sculled by a single person, but when oars are used, one, two, or more persons may handle them, and they are usually assisted by a third, the coxswain, who sits in the stern of the boat and steers.

The action of Rowing really consists of two parts,—the stroke proper and the feather. The stroke consists in pulling the oar through the water with its blade in a vertical position, so that the water will offer resistance to its passage. Strictly speaking, feathering is the turning of the oar at the conclusion of a stroke, by dropping the hands and turning down the wrists so that the blade becomes parallel with the surface of the water; but the term is also held to refer to the action of carrying back the oar in the same plane until it is in position to be dipped for another stroke, since during this motion the oar is said to be "on a feather."

Several styles of Rowing are, or have been, in vogue, but these differ only in form, not in principle, and a general description of correct rowing may be given that will include all styles. Its characteristics are a firm, clear-cut entrance of the blade into the water; a powerful, steady, and horizontal stroke; a quick, low, but clean feather; and a complete, powerful, and smooth finish.

The amateur oarsman should first learn to embark in the right way. Lay the blade of your oar in the water, if about to row the outboard oar; on the float, if the shoreward oar. Step into the boat with your face to the stern, placing your foot on the keelson so as to avoid any possibility of forcing your toe or heel through the bottom of the boat; stoop, place a hand on each gunwale and lower yourself easily into the seat. Now fit your feet into the stretcher-boots, provided for the purpose of holding the feet firmly in place, and ship the oar by inserting the small part of

the loom into the row lock and shoving the oar outboard to its proper position. Be careful to sit squarely in the middle of the boat and exactly opposite the row lock. Hold the body erect, with the shoulders thrown slightly back, and head up, and the elbows held close to the sides.

The position of the hand is important, and care should be taken that it is such as to give the oarsman the best leverage, with the minimum strain on his arms and hands. The oar should be held firmly, but easily, in both hands, the outside one close to the end of the handle, but not over the end. (Fig. 1, *a* and *b*.)

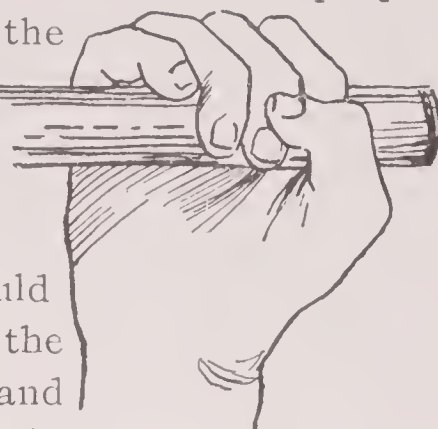


Fig. 1, *a* — Holding Oar (Wrong).



Fig. 1, *b* — Holding Oar (Right)

The fingers of both hands should be on top, and the thumbs underneath, though some oarsmen prefer to have the thumb of the outside hand in the same position as the fingers. The inside hand, which is nearer to the loom, or body, of the oar, should be from one and one-half to two inches away from the other hand, grasping the oar more convexly than the latter, and with the thumb underneath. It must be borne in mind that the greater exertion is required of the outside hand, since the inside

hand is used principally to guide and manipulate the oar.

The oar should be held at right angles to the keel of the boat and feathered; the forearms should be below the level of the handle, and the wrists dropped and relaxed. The inside hand must not be held too low, since a great deal of force will thus be lost,—the arm will be bent and the stroke weakened, while the shoulders could not be square. The difference in position of the two hands and wrists permits of both arms being stretched out perfectly straight when going forward on the recover, instead of one arm being bent, as would be the case if both hands were in similar positions.

At the beginning of a stroke, the body is inclined forward on the hips, with the back perfectly straight, the chest thrown forward and raised as much as possible, and the stomach kept well out and down. The great difference between the position of an oarsman and that of a soldier at drill is that the former is required to keep the stomach out, whereas in other forms of athletics and in drilling it should be kept in. The shoulders should not be dropped too far forward, as in Figure 2, *a*, and neither should be advanced farther than the other, while the top of each should be in the same horizontal plane. The joints of the shoulders and hips should play freely, since at these points perfect flexibility is required. The arm should be perfectly

straight from the shoulders to the wrist, and in the first part of the stroke they should be used merely as connecting rods between the body and the oar. (Fig. 2, *b*.) Should the arms be bent, the weight and strength are thrown on the handle of the oar, and thus a great part of the

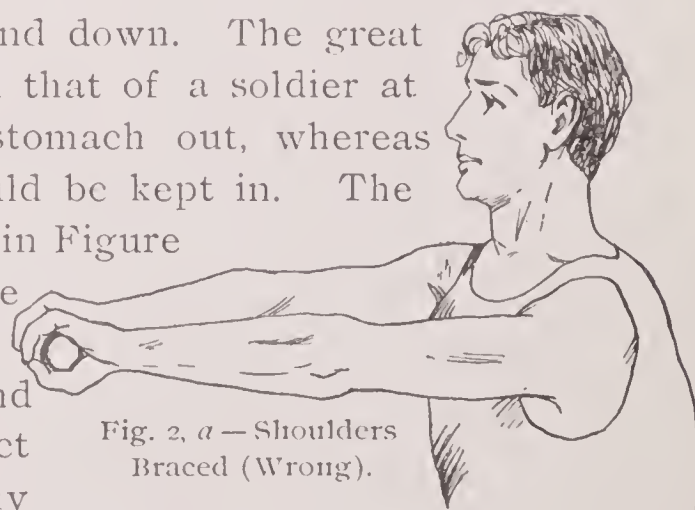
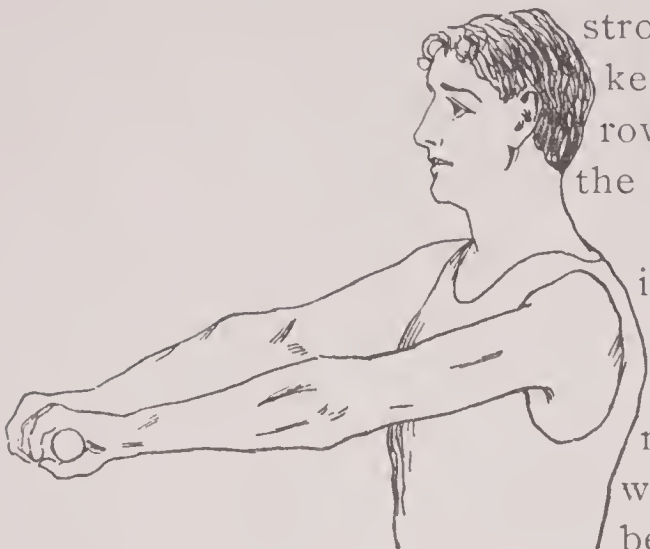


Fig. 2, *a* — Shoulders Braced (Wrong).



stroke is lost. The inside wrist should be raised slightly, and the outside one bent around so that the knuckles of that hand are parallel to the oar; the grasp of both hands must be firm, so that the stroke may be started strongly. In all parts of the stroke the head must be kept up, the eyes must look directly astern, or, when rowing behind another man, at the back of his neck; and the feet must be firmly braced against the stretcher.



One of the distinguishing marks of a finished oarsman is the peculiarly easy and graceful manner in which the arms are shot out straight from the body without the least pause. As the oar passes the knees, the wrist is raised so as to bring the blade at right angles to the water preparatory to the "catch"; should this motion be delayed, the oar will be likely to strike the water at

Fig. 2, *b* — Shoulders Braced (Right).

an angle, instead of squarely. As the arms shoot forward, the body and the sliding seat are drawn forward at the same time by the aid of the stretcher-boots. As soon as the oarsman's hands have passed the line of his stretcher, he should raise them straight up until the blade enters the water; the hand should not be lowered too much in going forward as this will tend to make the stroke short and choppy. The upper part of the blade should be just below the surface, since in a shell or other light boat special care should be taken to avoid dipping too deep, which would cause that side of the boat to be depressed.



Fig. 3, *a* — Finish With Biceps (Wrong).

The instant the oar takes the water, the rower should bring the muscles of the back and legs into play, and, throwing his whole weight and strength together against the oar, rise almost clear of his seat. It is difficult to explain the change from the end of the feather to the beginning of the

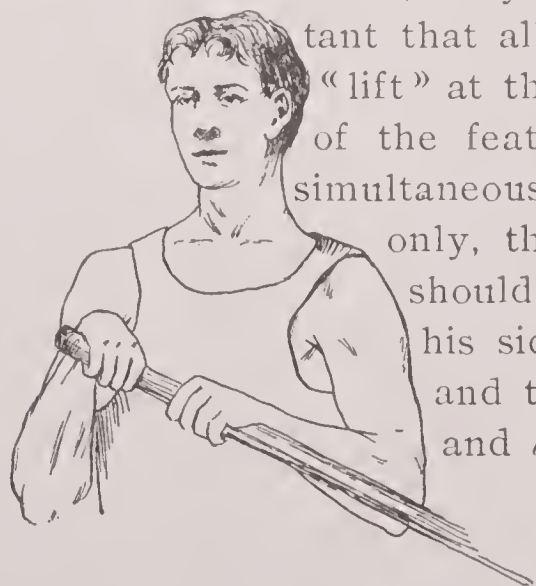


Fig. 3, *b* — Finish With Shoulders (Right).

stroke, and, in fact, they must be seen to be understood. It is important that all the men in the boat shall catch the water and "lift" at the same time, and in order to do this the end of the feather and the beginning of the stroke must be simultaneous. Having thus begun the stroke with the body only, the oarsman should finish it with his arms and shoulders, being careful to keep his elbows close to his side, to drop his shoulders well down and back, and to hold his head up and his chest out. (Fig. 3, *a* and *b*.)

The whole strength of the arms and shoulders should be given to the finish of the stroke, though this does not mean that the finish should be made with a jerk. The oar should be brought close to the chest, so that all the available length of the stroke is made use of. The hands should then be dropped straight down, turned

over for the feather, and shot forward again close to the legs, the body following at the same time. (Fig. 4, *a* and *b*.) Unless this motion is made properly, the oar will be feathered under water, and the oarsman will "catch a crab."

The movement of the slide on the recovery must be controlled carefully, so that the body will go forward evenly from the hips, and not with a jerk.

The following points are referred to by a well-known oarsman as among the most important in executing a stroke:—

"First, when the hands are raised at the beginning of a stroke, and the oar thus plunged below the surface, the whole power of the oarsman's body should be brought to bear at the moment of the oar's contact with the water, so as to give the greatest effect to the first or vital part of the stroke; second, the pull home to the chest should be made in a perfectly straight line, thus causing a horizontal stroke through the water; third, the finish of the stroke should be as quiet and easy as it is possible to make it, but there should be no lessening of the force applied, which naturally diminishes because at the first part of the stroke the oar is at an acute angle to the boat, and afterward at an obtuse angle."

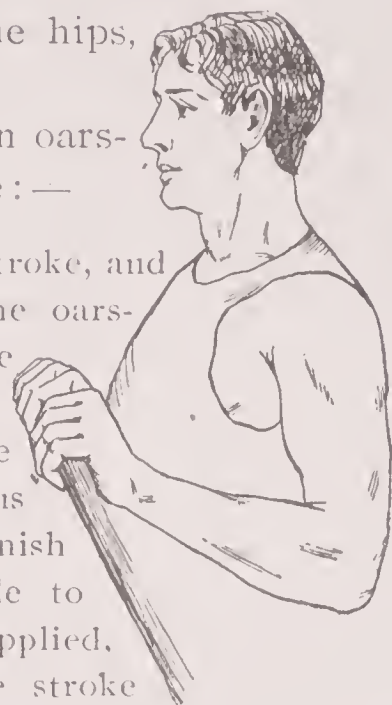


Fig. 4, *a*—  
Hands Turned Before Dropped (Wrong).

Next in importance to the foregoing movements are those of the oar itself. As the oar goes forward on the feather, the blade should be kept constantly in the same horizontal plane, which should be just far enough above the surface to avoid touching the water, whether it be smooth or rough. At the time of the dip, the oar must be plunged sharply into the water, and the blade must be immersed before any force is applied. As the oar passes from the feather to the dip, it performs a motion which may best be described as a *powerful scoop*. The oar should not enter the water so suddenly as to cause a splash; to prevent this, perfect control of it must be retained as the arms go forward. It has been said in general terms that when the blade is immersed it should be at right angles with the surface, but this is not strictly true; the proper position is for the front face of the blade to be inclined slightly forward, so that its entry into the



Fig. 4, *b*—Hands  
Dropped Before  
Turned (Right).

water is less than a right angle. This increases the oarsman's reach, gives a clear-cut dip, prevents the blade going too deep, and causes the boat to be, in a sense, lifted through the water. To combine the foregoing movements in an easy, finished whole is no light matter, yet the ability to do so is required in an expert oarsman.

The main points to be remembered by the beginner may be pointed out briefly as follows: First, a full, fair reach-out over the stretcher, with both arms perfectly straight; second, a firm, square catch at the dip, with the application of the weight and strength of the body at the moment of



immersion; third, a strong stroke with the blade at medium depth, pulled straight through the water without wavering or vibration, yet always long and seemingly easy; fourth, a graceful and easy, but forceful finish, with a clear turn of the water off the after edge of the blade, the feather being light, as low as possible, and rapid; fifth, one instantaneous connected movement as the oar completes the feather and dips to begin the new stroke.

The foregoing description has referred only to plain pulling, but there are various other maneuvers which go to make up the science of Rowing, such as paddling, easing, holding water, and backing.

*Paddling* is simply a milder form of ordinary rowing, the other extreme being known as "spurting." The difference consists principally in the amount of strength applied, and in the number of strokes taken to the minute, though there is also often a difference in the length of stroke.

*Paddling* is especially valuable to the beginner and the coach, since it enables the former to perfect his style and the latter to discover and correct faults.

*Easing* is a reduction in speed, either from spurting to ordinary Rowing, from Rowing to paddling, or from one of these to a cessation of Rowing. The latter is the more common meaning, being generally understood to signify "stop pulling." The command "Easy all!" means merely to reduce speed, and the order "Row easy all!" may be given at any part of the stroke. The order "Easy all!" on the contrary, should be given immediately after the beginning of the stroke.

*Holding water* is the means employed to stop a boat suddenly. The maneuver is executed by partially reversing the oar and holding it farther under water than in ordinary pulling, so as to check the boat's momentum. The oar should be held with the blade in nearly the same position as on the feather, but under, instead of above, the water. By changing the angle of the oar, thus increasing or diminishing its depth, the amount of resistance offered to the progress of the boat may be made greater or less. Thus, by turning the upper edge of the blade downward, the oar goes deeper into the water, while, by depressing the after or lower edge, the blade is brought nearer the surface.

*Backing* is the movement necessary to propel the boat backward, and hence is the exact opposite of Rowing. The oar is reversed, as in holding water, and the handle is pushed away from the body, instead of being pulled toward it. The movement is begun with the body well back on the slide, and is finished just beyond the knees. The blade should not be sunk too deep; the first part of the stroke, as in ordinary rowing, is the most important; the entire stroke through the water should be long and light; and the oar should be feathered, and carried on the feather in the same manner as in ordinary pulling. In backing a boat, care must be taken that the strokes are as smooth as possible, since otherwise the strain on the outrigger might be so great as seriously to damage the boat.

The foregoing movements should be practiced until they can be executed easily and correctly, and the oarsman should learn to change easily and smoothly from one to the other.

The act of disembarking is attended with considerable danger to the boat and oars; it should be done carefully in the following manner: Bring the boat alongside the float, with very little way on, and come to a standstill, either by holding water with the off-shore oars or by having an assistant on the float catch one of the on-shore outriggers. Unship the oars and lift them out before leaving the boat. When rising from the seat, place one foot on the keelson in a fore-and-aft position, support yourself by grasping the gunwale on each side, and step lightly on the float. The boat should be held steady during this operation by at least two persons, one of whom may be the cockswain, who should disembark first.

### SCULLING

AS WAS stated at the beginning of the foregoing article, Sculling is usually performed by one person, who sits in the center of the boat and uses a pair of short oars, called "sculls," one in each hand. In double Sculling, which is now also in vogue, there are two persons and four oars. The inboard length of the sculls is such that they overlap more or less, and for this reason one hand must be held above the other. It may be left entirely to the preference of the sculler which hand shall be uppermost, since there is no arbitrary rule to be followed in this regard.

The principal things to be kept in mind in Sculling are to sit upright, to get a long, full reach well over the stretcher by dropping the body forward between the knees, which should be spread apart as the arms shoot forward, to execute a firm, scooping dip, as explained under rowing, and thus to *lift* the boat *over* the water in the first part of the stroke.

The amount of power applied will naturally diminish gradually as the stroke nears completion, but the sculler should be careful not to finish with a jerk, since the frail outriggers used in Sculling are capable of withstanding but little downward pressure. In reality, the principles of Sculling are very similar to those of rowing with a single oar. The body should not be permitted to fall too far back of the perpendicular, the elbows should be kept close to the sides, the feather should be low, but clean, and the recovery should be quick, rapid and smooth.

To turn a boat with sculls, back water with the oar on the side toward which you wish to turn, and pull with the other. It is much easier to come to a full stop with sculls than with oars, though the movement is executed in exactly the same manner, as is also that of backing water.

When not in use, the sculls should lie flat on the water, with the concave side uppermost to preserve the equilibrium of the boat. Since the sculler has no cockswain, he must do his own steering, and must depend upon himself to keep the boat in an upright position, hence must be careful to pull evenly with both hands. To assist him in keeping a straight course, he should keep his eyes on some fixed object astern, and by turning his head, not his shoulders or body, slightly to the right or left, avoid obstacles in front. Especially in racing, the difficulty of steering is great, and the sculler should never permit himself to become so excited as to



neglect it; this has often been known to cause the defeat of a sculler who might otherwise easily have won his race.

A rate of thirty-five or thirty-six strokes to the minute is considered very good for the average sculler, and this rate will be lessened in rough water. Perhaps the two most important points in fast sculling are a long stroke and a high, clean feather, the latter of which will be impossible unless the boat is kept on an even keel. It is easy to be seen that if the blade comes in contact with the surface of the water on the recovery, the speed will be lessened appreciably.

## LAWS OF BOAT RACING, OF THE NATIONAL ASSOCIATION OF AMATEUR OARSMEN

### STARTING

1. All boat races shall begin in the following manner: The starter, on being satisfied that the competitors are ready, shall give the signal to start.
2. If the starter considers the start false, he shall at once recall the boats to their stations; and any boat refusing to start again shall be disqualified.
3. Any boat not at its post at the time specified shall be liable to be disqualified by the umpire.
4. The umpire may act as starter if he thinks fit; where he does not so act, the starter shall be subject to the control of the umpire.
5. Boats shall be started by their sterns, and shall have completed their course when their bows reach the finish.

### WATER

6. A boat's own water is its straight course, parallel with those of the other competing boats, from the station assigned to it at the start to the finish.
7. Each boat shall keep its own water throughout the race, and any boat departing from its own water will do so at its peril.
8. The umpire shall be sole judge of the boat's own water and proper course during the race.

### FOULS

9. It shall be considered a foul, when, after the race has begun, any competitor, by his oar, boat, or person, comes in contact with the oar, boat or person, of another competitor; unless in the opinion of the umpire, such contact is so slight as not to influence the race.
10. No fouling whatever shall be allowed; the boat committing a foul shall be disqualified.
11. During the race, the umpire may caution any competitor when in danger of committing a foul.
12. The umpire shall decide all questions as to a foul.
13. A claim of foul must be made to the umpire by the competitor himself, and, if possible, before getting out of his boat.
14. In case of a foul, the umpire shall have the power—(a) To place the boats (except the boat committing the foul, which is disqualified) in the order in which they come in. (b) To order the boats engaged in the race, other than the boat committing the foul, to row over again on the same or another day. (c) To restart the qualified boats from the place where the foul was committed.

## ACCIDENTS

15. Every boat shall abide by its accidents, except when, during a race, a boat while in its own water shall be interfered with by any outside boat, the umpire may order the race to be rowed over, if, in his opinion, such interference materially affected its chances of winning the race.

## ASSISTANCE

16. No boat shall be allowed to accompany a competitor for the purpose of directing its course or of affording other assistance. The boat receiving such direction or assistance shall be disqualified at the discretion of the umpire.

## UMPIRE

17. The jurisdiction of the umpire extends over the race and all matters connected with it, from the time the race is specified to start until its termination, and his decision in all cases shall be final and without appeal.

18. The judge-at-the-finish shall report to the umpire the order in which the competing boats cross the line, but the decision of the race shall rest with, and be declared by, the umpire.

19. Any competitor refusing to abide by the decision, or to follow the directions, of the umpire shall be disqualified.

20. The umpire, if he think proper, may reserve his decision, provided that in every case such decision be given on the day of the race.

21. Contestants rowing a dead heat shall compete again after such interval as may be appointed, and the contestant refusing to so row shall be adjudged to have lost the race.

## TURNING RACES

In turning races each competitor shall have a separate turning stake and shall turn from port to starboard. Any competitor may turn any stake other than his own but does so at his peril.

## CANOEING

CANOEING, one of the earliest of the useful arts of man, is even to this day one of the most charming and simplest of outdoor recreations. It requires no unusual dexterity, the cost is not prohibitive, and poor, indeed, is the stretch of water that does not give the canocist opportunity. It is the ideal form of aquatic exercise.

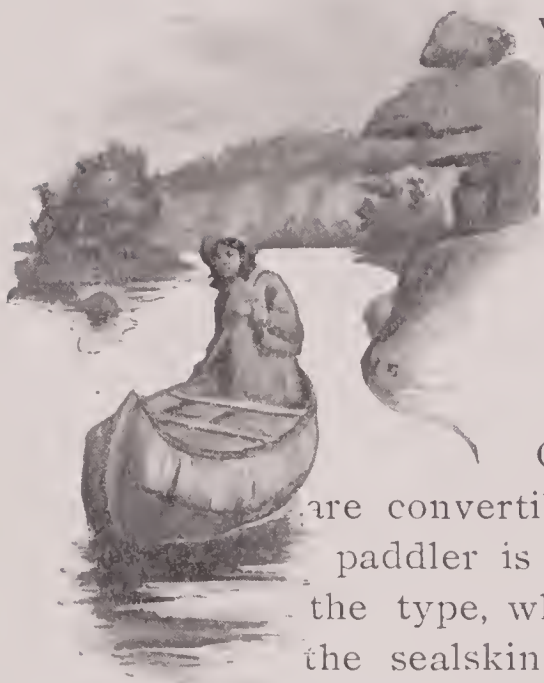
Where there is water, canoes are to be found. Naturally, they vary greatly in appearance and detail, and the term has been used to include all sorts of boats, but public usage has established pretty definitely what is meant by canoe.

Generally speaking, then, a canoe is a boat sharp at both ends, which can be as easily propelled astern as ahead; it must be of light draught, capable of navigation in shallow and in very rough water and, as a general rule, of such light construction as to be



easily transportable by its users, when necessary, overland from water to water or around an obstructive fall or rapid. Further, a canoe when not under sail is always propelled by paddles, used without row-locks or other fixed boat-fulcrum.

To describe the many varieties of canoe in use even on our own waters is beyond our scope. A simpler plan is to tell of the uses of the canoe, and, as we go, describe the types best fitted to these uses.



## CANOES AND CANOEING

OF CANOES there are sailers and paddlers, and those which are convertible in a greater or less degree from one to the other. The paddler is the primitive boat of man and does not differ essentially in the type, whether it be the "dugout" or birch bark of the Indian, or the sealskin, whalebone-ribbed fishing boat of the Eskimo. The sailer is more complicated; it is in fact a miniature yacht, and is sailed in practically the same manner. An open, clear water is needed for the sailer; the paddler can find a welcome in all but the most churlish and insignificant streams.

The paddler is the boat of the hunter, the lover of nature, and the camper. It is the key to the wilderness. It opens up the inaccessible places. If you would get into the cool sweet woods, or seek the unpolluted waters near their source, the canoe will take you. It will give you transportation by day, carry your stores, and be your hotel by night. But you, too, must do something in return. You must be prepared when a rapid or a fall intervenes, or when you want to cross a watershed, to take your Canoe upon your shoulder and trudge with it. This carrying is called portage. If you have the right kind of Canoe, and are yourself the right kind of canoeist, you will not mind this.

Let us assume that you are going to take a trip of a week or two through the woods; you will want to know what to do and what to take. You are going alone, so as to enjoy nature unhampered, and naturally, for freshness, you are going up stream. Your first care will be the selection of a suitable Canoe. You will take a paddler, for portage may be necessary, and sailing and steering gear are of prohibitive weight. You have a choice of two kinds of paddlers, the decked, or covered in, and the open kind known as the Canadian open canoe.

The decked Canoe, except for a cockpit of from five to seven feet, is covered over bow and stern, with waterproof canvas or other suitable material. Stores and camping gear can be secured safely underneath this, and the boat is buoyant beyond the possibility of sinking.

The Canadian open Canoe is, however, a more desirable boat. As it is usually fitted with waterlights at either end, it has nothing against it in regard to safety, while it has the advantage of greater freedom of movement and better facilities for stowage and discharge than the deck boat. For

cruising it has almost superseded the covered Canoe. It has the further advantage of being easier of portage in many ways.

Your next care will be to ship your provisions. You will need a week's supply, at least. Your own taste and judgment must be employed in deciding what to take and how much, but of course you will have to depend upon biscuits for breadstuffs, and largely on canned foods for the rest of your larder. If you are a hunter or a fisherman, you will be able to provide yourself with fresh delicacies. Your next care will be for the cooking apparatus. If you carry matches in corked bottles you may rely on driftwood fires. It is always advisable to carry a can of kerosene, but unless the can is absolutely oil-proof it is likely to be a source of contamination to everything in its vicinity. In wet weather it is difficult to do without this. Cooking utensils may range from a billy-pot and a few tin pots and a frying pan, to one of the latest ingenious condensed kitchen arrangements put on the market by enterprising manufacturers.

You have noticed that we have not taken hotels or wayside houses into consideration, for the trip the real earnest canoeist wishes to take, will be off the beaten track, and he will be alone with the silent, nodding trees and the lapping water. Carry your own hotel, a tent securely wrapped around its pole and stowed lengthwise along the Canoe. Some Canoes can be converted into tents, and very pleasant quarters they make. The canoeist is the free man of the blue sky and the deep woods. In the kingdom of nature he pays no tribute to convention.

Bedding and clothes are the next consideration. Woolens and flannels should be insisted upon. Two stout blankets, one of which when folded will serve for a mattress, or when cold as an extra cover, a pneumatic pillow with a removable and washable cover, and a thick serviceable suit of woolen pajamas, will be found essential. A pair of woolen wading boots, are excellent in the kit. Add a small ax and a jack-knife or two, and you have the necessities of your trip. Then you must see that all perishable or damageable articles are carefully preserved in waterproof bags, so that an occasional immersion will not hurt them. If you are a photographer, you will take a camera; if a hunter, a gun; if a fisherman, a rod and tackle. Your own taste and judgment will suggest what you shall carry over and above the actual Canoeing outfit.

For one person, a boat fourteen feet in length and twenty-eight to thirty inches in beam will be of ample size. For two, a Canoe of large size is necessary. In that case the stores are stowed amidship, and the canoeists sit, one in the bow and the other in the stern. Everything in the boat is lashed securely to obviate any danger from capsizing; and should the boat ground or reach an obstruction, the position of the two men is such that they can immediately jump out—for the canoeist is never afraid of getting his feet wet—and right the boat, carry it over a shallow, or bear it between them to the land. Every ingenious man will devise his own means of covering and securing his stores, always, of course, using waterproof cloths and coverings. A hundred and one simple and effective plans are possible.



So much for the paddling cruising Canoe. It furnishes a clean and wholesome recreation. There is a manly independence, a freshness and vigor in the sport which appeal to the open nature. The cost is small—such a boat can be purchased for from thirty dollars upward. A Canoe, when strongly built, can be fitted with a mast and sail and in that way its capability for usefulness and pleasure giving is increased.

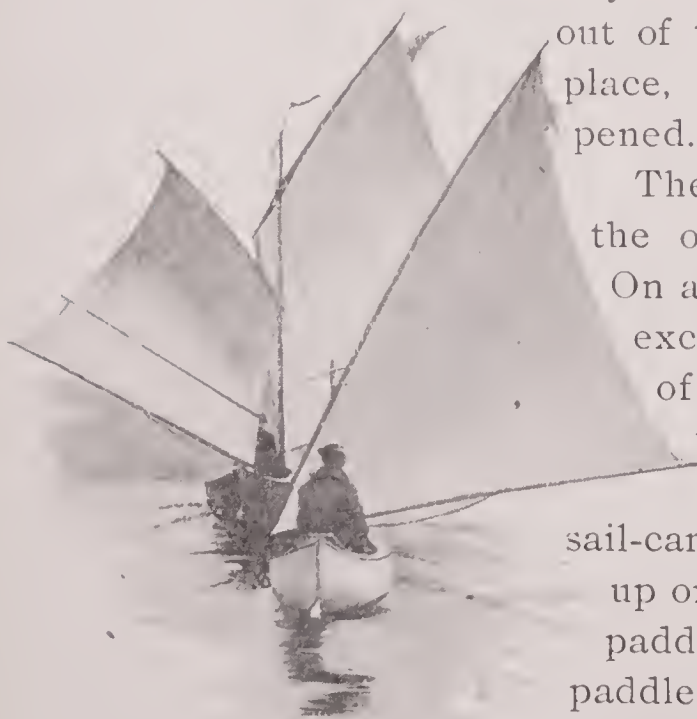
The sailing Canoe is really a yacht of smaller size. It is a much more complicated vessel than the paddler. It has its centerboard, its rudder, steering gear, sails and masts, and frequently a sliding seat which can be projected over the side of the Canoe. The hull, however, retains all the characteristics of the Canoe. A Canoe under sail is the prettiest of all boats. Its airy lightness, as it swiftly skims over the water makes it look like a graceful bird flying low on full wing.

There are two types of the sailing Canoe. One is built simply for speed and is exclusively a racing machine, the other is a comfortable pleasure boat. The racing sailing Canoe is decked over, with the exception of a very small cockpit, or well, as the open hollow space amidships in the boat is called, and into this the captain places his feet when working the Canoe. It is a water-tight shell, and even if the cockpit fills with water, or the Canoe is overturned, it will not sink, as the air-chambers in the decked over space give it exceptional buoyancy.

Owing to the large sail surface of a racing Canoe it is extremely liable to capsize, but such an event is a trifling circumstance to the canoeist. When it occurs, he climbs out on the windward side, and by his weight on the rudder and by using the extended sliding seat as a lever, lifts the sails out of the water, rights the boat and, climbing back to his place, proceeds on his way as if nothing unusual had happened.

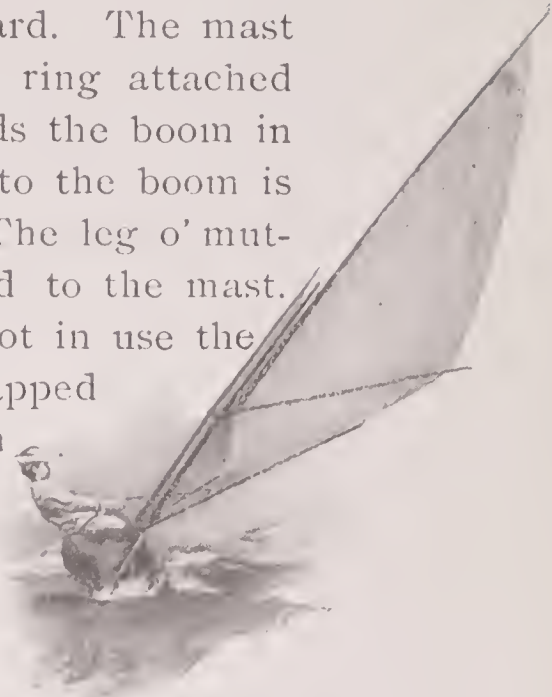
The racing Canoe is of little use as a pleasure boat, but the ordinary sailing cruiser is an argosy of enjoyment. On a lake, on the broad surface of bay or river it is unexcelled as a pleasure craft. In skilful hands it is one of the safest of boats, and has advantages possessed by no other. The same Canoe can run out to sea, and can enter a river or creek unnavigable to all other sail-carrying boats. It is comfortable, can always be hauled up on the beach and used to sleep in, and, indeed, like the paddler, it becomes the hotel of its skipper. Unlike the paddler, it does not take the Canoeist to the retired spots of nature inland, but on a lake shore or in a nook of an armlet of the sea, it introduces him to equally fresh delights. On our lakes, studded with islands, every Canoeist can become his own Crusoe—can be monarch of all he surveys, as long as his provisions and his ecstasy lasts.

The Canoe sails most in general use to-day are the leg o' mutton, the canteen, and the lug. Of these three the lug is held by many Canoeists to be the best. It approaches nearer to the square than the others, and the nearer the sail is to a square the better for the Canoe. The canteen,



however, has the advantage of being a very simple sail and easy to manage. These are desirable qualifications when it is considered that one man has to handle the sails and at the same time balance and manage the Canoe. It is a triangular sail, with two sticks, boom and yard. The mast is short and fitted with a pin at the top. Over this fits a ring attached to the yard. A jaw on the boom which fits the mast, holds the boom in place and allows the working of the sail. A line attached to the boom is called the sheet, and with this the skipper trims his sail. The leg o' mutton sail is also triangular, but is a standing sail attached to the mast. The boom swings around the mast on a ring, and when not in use the boom can be folded up against the mast and the sail wrapped around it. The lug sail is patterned after the sails of an old Chinese junk. It is simple and good.

In selecting or judging sails, it is always well to bear in mind the essential difference that must exist between the sails of a Canoe and the sails of a yacht. The rig that will serve admirably for one may mean destruction for the other. The crew of the yacht have room to stand about or to shift their positions when necessary, but in the Canoe one man is—



"The cook and the captain bold,  
And the mate of the Nancy brig,  
And the bo'sun tight, and the midshipmite,  
And the crew of the captain's gig,"

and he has to do all his work from an unchanging position.

The greater the sail area of a craft, the greater must be its lateral resistance; and since no keel, or practically none, is fitted on a Canoe, a centerboard is employed to enable her to "stand up" before the wind. The centerboard is really a removable keel. It is a brass plate working in a trunk in the body of the Canoe, and can be raised or lowered at will, by a rod or line. If placed in the center of the boat, it sticks up in the well and obstructs the sleeping quarters of the canoeist, but from a purely sailing point of view this is the best position for it.

In many boats it is placed well forward, and an attempt is made to balance this disadvantage by the arrangement of the two sails. A large sail is used forward and a small sail aft. Some Canoes are fitted with two centerboards, the second being small and carried aft. A centerboard weighs from eighty to one hundred pounds, and is dropped on all occasions except when the Canoe is running in shallows or is being beached, and when she is running before the wind. Even when running before the wind, it is frequently let down, since it is an excellent ballast and retards the speed but slightly. When not in use, it can be lifted out and put away.

The rudder is another highly important part of the sailing Canoe. The one now most in use is known as the drop rudder. It works on a shaft, and by means of a line can be raised to the stern of the Canoe; by releasing the line the rudder's weight causes it to drop back to its deep position again. Thus, even when the stern rises on a wave out of the water, the



rudder is at least partly immersed and can be depended on to steer the craft in a rough piece of water. Like the centerboard, the rudder can be removed, when the Canoe is in shallow water, and may be used for paddling. A tiller connecting with the rudder is pivoted on the deck, and can be reached by the canoeist from either side.

The racing-sailer Canoe is, as has already been said, simply a racing machine. It requires an expert, one who is an athlete, and almost an aerobiat, to manage it. The skipper on his precarious seat has a hard job to keep right side up. The seat slides outward on either side extending over the water. On this the canoeist sits or leans, using his weight and the leverage of his body to keep the Canoe from capsizing. He sits on the windward to balance the pressure on her sails and to keep the Canoe from going over on her side.

### INSTRUCTIONS FOR CANOEISTS

CANOEING, whether sailing or paddling, is a splendid exercise. It is a braeing, healthful, invigorating recreation. Although boating is popularly supposed to be a dangerous pastime, canoeing really ought not to be so considered. Taking it all in all, it is the least dangerous of the vigorous sports, for the canoe is, when properly constructed, an unsinkable lifeboat. A ducking is usually the worst effect of a spill, for even if the canoeist is not able to swim, he is able to save himself by clinging to the floating craft. However, no one should engage regularly in aquatic exercise without first learning to swim. It is not only a means of safety when capsized, but it begets confidence and enhances the enjoyment of the canoeist.

To the beginner the little arts of the canoeist will be unfamiliar, but they are readily learned and the novice may speedily acquire the knack of handling the paddle or manipulating the sails.

Paddling brings into play the arms, wrists, back, and to a certain extent, the legs. The paddler may adopt one of three positions, sitting, kneeling, or standing. It is, however, a dangerous and useless practice to stand in a canoe, as the advantages to be derived from that position are trifling at best. The sitting position is the one the canoeist will naturally take; it is the safest and most comfortable. The young canoeist will have his seat fixed as low in the canoe as possible. Thus he lowers the center of gravity and increases the stability of the boat. A higher seat would give greater power of paddling, but with the peril of a "cranky" canoe.

A single person in a canoe will use a double-bladed paddle, but where two are in the boat they will use single blades, one sitting forward, the other aft, paddling on opposite sides and changing when they grow tired. Expert canoeists, even when alone, use the single blade, but should the beginner do so, he will find considerable difficulty in keeping the canoe headed in the right direction, as all the force must necessarily be exerted on one side and the boat will be driven out of its course.

When the single blade is used by one person, the canoe is kept in its right course by a certain turn of the paddle at the end of each stroke.

When the knack of making this turn is acquired, it is very simple to keep a true course all of the time.

The Canadians, who are very fond of canoeing, largely adopt the kneeling position. They kneel on a cushion in the bottom of the boat, at the same time half-sitting on a crosspiece against which their heels are braced. Usually this cushion is stuffed with cork shavings and, in case of accident, can be used as a life-preserver.

Two dips of the double-blade paddle, one on the right side of the Canoe and one on the left, go to make up "a stroke." It is a simple and natural motion and the canoeist will readily fall into it. In a Canoe, the paddler faces the bow, and all the time is looking in the direction the Canoe is going, which is an improvement on the crouched position assumed in a row-boat, where the rower always faces astern. It is one of the things that add to the enjoyment of Canoeing, that you always see where you are going, the head is held erect, and the scenery on either bank of the stream is unfolded before you as you pass.

If the paddler using a double blade sits, not kneels, his feet will rest on a stretcher which will give him a good brace, and his back will be propped up by a cushioned attachment. We learned the use of the double-blade paddle from the Eskimo. The North American Indian always used the single blade in his birch-bark canoe.

The length of the paddle varies according to the beam of the boat. Formerly seven feet was considered a suitable length for a beam of twenty-eight to thirty inches, but nowadays an eight or nine foot paddle is used with a thirty-inch beam. The paddle blades will give better service if they are without "spring." They should be tipped with sheet brass or copper, and the young canoeist will find it well to fit his double blades with drip-cups, to protect himself from the annoyance of wet hands. The cups are placed on the handles outside the hands, and receive and throw off the water that runs down from the blade when it is elevated too high in the air.

Steering gear is attached to some Canoes, even though the craft is exclusively for paddling. In such cases lines run from the head of the rudder to pedals at the bottom of the boat, and thus the paddler can control the rudder by simple movements of his feet.

In sailing it is more difficult to give directions to the beginner. Practical tutelage is indispensable, and more can be learned in an afternoon's cruise than in all the written instruction that could be devised. The amateur, however, may learn some of the general principles of sailing. In the first place he should know the things by which the stability of the boat is affected. He already knows of the uses of the centerboard and the drop rudder, both of which, in addition to their regular functions, serve as ballast and allow a greater area of sail. A sail spread low and broad, rather than high and narrow, contributes to stability.

A paddle should always be carried when sailing, for there is a risk that the wind may fail, and without the paddle the canoeist is left to drift helplessly.



The sailing canoeist needs all his caution. It is not a mark of good seamanship to carry full sail when others are reefing. Most of the Canoeing accidents are due to foolhardy people who attempt to "go one better" than anybody else in "dirty" weather.

Canoeing is not a winter sport, and the canoe will have to be cared for during the months of idleness. It should be protected from the weather, and varnished or painted, according to the style to which it belongs. It will repay this care. A well-built canoe can be counted on to pay an annual interest of happiness and pleasure for twenty years.

Finally, learn to swim as the first course in your Canoeing; acquire the habit of carefulness in the management and equipment of the Canoe; take good care also of yourself, and remember that the moments of particular danger are those when you are getting into and out of the Canoe. Don't wear laced shoes in the Canoe. Provide yourself with a pair of slippers, so that when you fall into the water, as every canoeist does at one time or another, you can kick them off and be unimpeded in swimming.

## BOAT SAILING

"Man made him a boat of a hollow tree,  
And thus became lord of the bounding sea."

NOTHING is known of that prehistoric ancestor of ours who laid the foundations of future world-wide empires. But inasmuch as he had developed some common sense, it is safe to assume that before he undertook a voyage in his unsteady craft he had learned to swim. Although there is a vast difference between the hollow tree of the savage and the small sailing craft of the twentieth century yachtsman, they still have in common the possibility of a capsize.

Wherefore, now as then, the man who goes a-sailing does well to learn first how to swim.

This is not said with the intention of exaggerating the danger that lends zest to the sport of yachting. It all depends on the skill of the man who handles the tiller and tends the main sheet. If he understand his business, a small sailboat may be brought with perfect safety through foam-capped seas, in a stiff breeze. It is under such conditions,

when the salt spray is dashing over the bows, when the sharp cut-water is cleaving the billows, when the lee gunwale is almost level with the angry sea, and the flying craft leaves a creamy furrow astern, —it is then that the yachtsman's cup of happiness is filled to the



brim, and that he feels such ecstatic thrills as the "landlubber" never knows. But if the man at the helm be a bungler, joy may be turned into lamentation in the twinkling of an eye — especially for the man who can't swim.

It is this demand for skill and resourcefulness that makes yachting such a fine school for the cultivation of the manly virtues. There is no question concerning its healthfulness. Association with the sea acts as a moral as well as a physical tonic. Self-reliance, pluck, endurance, and many other qualities essential to success in life, are continually brought into demand, especially when racing. Let parents remember this when casting around for a healthful means of recreation for their boys.

### SAILBOATS AND SAILORS

IN MOST cases, at least, it is best to learn how to sail a boat before seeking to own one. While learning, one acquires a good idea of the type of boat that is best suited to his needs. It is very easy to learn the rudiments of sailing; but to impart the necessary instruction through the medium of the printed page would require a book in itself, and a large number of diagrams and illustrations, and even then the results would be far from satisfactory. The best way to learn to sail a boat is to get a friend to instruct you. If such a friend is not available, the next best way is to hire a boat of some old salt and secure the services of the owner as instructor. A small and simply-rigged boat is best for the learner.

It is impossible to overstate the necessity for caution when first undertaking alone the management of a boat. The first venture should be made when there is only a moderate breeze. If the wind freshens much, take in a reef, no matter if other boats are carrying full sail, and flying along in a smother of foam. Their skippers are not beginners. Enlarged experience, while giving one a better command of the boat, and a keener appreciation of her capacity to careen in the wind, without risk of filling, will, at the same time, emphasize the need of what sailors call "keeping the weather eye open" all the time.

When sailing on a lake or river, with banks of irregular height, the boatman must be on his guard, because, from between the hills, puffs of wind of great violence may swoop down on him with very little warning. Easing off the sheet a few inches and luffing gently will generally prevent the shipping of water over the lee gunwale, and may avert a capsize. To be prepared for such emergencies, the main sheet should never be made fast permanently, and should always be coiled so as to run freely. When these precautions are neglected, a sudden squall may cause fatal results. In such a contingency, if a knife is handy, the main sheet should be cut at once, and the boat, even if of the shallow centerboard type, being relieved of the pressure of the wind on her sails, may right herself, though almost



on her beam ends. In such emergencies, the cool head and quick hand count for everything.

Many places along the coast are visited in summer-time by brief, but violent, thunder storms. If caught in a boat in one of these squalls, especially if there be women or children aboard, the best thing to do is to take in every stitch of canvas and let go the anchor. The disposition to carry a large amount of sail when the wind is stirred to sudden fury, annually causes much loss of life. It is not the seaman, but the lubber, who neglects to take proper precautions. Rashness is not courage.

The man or boy who wants to become a thorough yachtsman should begin with a comparatively small boat, which he can handle without assistance, both steering and trimming sails for himself. Such a craft forms the best school of yachting seamanship. Nearly all of the crack yachtsmen of to-day, whatever the size of the yachts they now sail, cut their nautical eye-teeth on small boats. The Prince of Wales began with a small craft. So did his son, the Duke of York. C. Oliver Iselin, of New York, who raced the "Columbia" when she successfully defended America's cup against Sir Thomas Lipton's "Shamrock," learned the tricks of the trade on a small yacht. And it is noteworthy that the yachtsman starts his sons in the same way.

Obviously it is the best way. In fact, a small yacht furnishes in some respects more exciting sport than a large one. On the large yacht, it is the hired skipper who gives the orders and the hired crew that executes them. The owner's rôle is hardly more than that of a highly privileged spectator. On the small boat, the owner gives his orders and executes them, too. He is part and parcel of his craft. If she wins a race, the glory is his, not some hired man's. Not a few wealthy men who own palatial steam yachts, carry, besides row boats and naphtha launches, swung from the davits, a small sailing yacht—frequently an up-to-date racing craft—that they may occasionally enjoy a taste of this stimulating sport. Therefore the tyro has no cause to complain if his comparatively moderate means compel him to start with a small boat. It is the best way to start, no matter how large a yacht he may be able to buy.

In choosing the style of boat, remember that no one boat can combine every desirable quality. Probably that which will give the greatest satisfaction to the greatest number is the "single-hand" cruiser. This is a sailboat suitable for cruising—that is for living on board for days at a time, minus, of course, many of the comforts of home, while journeying from one place to another—and capable of being managed by one man under all ordinary circumstances. It does not mean that the boat will hold only one person; on the contrary, single-handers are always designed to carry two or more; and for short spins may accommodate four or five quite comfortably. But to be handled effectively by one man, the boat must be comparatively small, certainly not over twenty feet on the water line, and preferably between fourteen and eighteen feet.

With the long overhangs, fore and aft, now found in modern yachts, a boat eighteen feet on the water line will measure from twenty-three to

twenty-five feet or more over all, which makes of her a good-sized little ship. Unless the sailing is all to be done in deep water, the draught should be light, which means that the boat should have a centerboard. A deep-draught boat is very unhandy in shoal water, and necessitates the towing astern of a small dingy, to make landings, etc. The boat of shallow draught cannot be rendered non-capsizable. But by providing watertight sections sufficient to float her when full of water, she may be easily rendered non-sinkable when capsized. To insure safety, this must be done.

In a single-hander, that element may be further conserved by building the floor of the cockpit above the water line and providing drainage tubes, or scuppers, through which the water that finds its way in over the deck may run out. This makes the boat self-bailing. Of course the floor and siding of the cockpit should be practically water tight. The air compartments in the ends may be utilized, by means of deck hatches, for stowage. Such a boat cannot well have a cabin, being too small and shallow for that. But sleeping accommodations may be provided by setting up a tent over the cockpit, or by camping on shore as canoeists do.

The rig should be simple, as much of the handiness of the boat depends on that. A jib and mainsail are preferable to a single large mainsail, as in a catboat. Such a sail is awkward to manage when running free or when reefed down in a blow. The yawl rig has some advantages over the jib and mainsail rig. A boat with the former rig may be worked, when the wind pipes fresh, under the jib and mizzen without the mainsail, or under the mainsail alone, set full or reefed. But the yawl rig is somewhat less speedy than the jib and mainsail rig. In a cruiser, however, speed is not of prime importance.

A boat of the type described, fifteen feet on the water line, twenty feet over all, well and substantially built by a reputable builder, and provided with sails, can be purchased new for about two hundred and fifty dollars. A boat of the same class eighteen feet on the water line, twenty-three feet over all, similarly equipped, will cost approximately three hundred dollars.


Nearly all of the canoe builders construct canoe yawls which make capital little cruisers where the work demanded of them is not too rough. They are built like canoes, to a length of eighteen feet, and are four or five feet wide, and much deeper than a canoe, so as to give more free board. Such a boat is fairly safe, fast, moderately comfortable, and is easily handled by one man. Fully rigged, it will cost about two hundred dollars.

These boats, it should be understood, are without cabins. The more elaborate types, provided with cabins and sleeping berths, and outside lead ballast on the keels, are far more costly. For instance, a single-





hander yawl, seventeen feet on the water line, twenty feet over all, seven feet beam, drawing three feet six inches without the centerboard, and six feet with the board down, having five feet of head room under the cabin trunk, and two sleeping berths, is catalogued by a first-class builder at six hundred dollars, nine hundred dollars, and one thousand two hundred dollars, according to the grade of finish.



In recent years, the demand for a good all-around type of boat, speedy, roomy, comfortable, safe and seaworthy, has been admirably answered in the evolution of a class known as "knockabouts," which have attained wide popularity in eastern waters. The knockabout is rigged with jib and mainsail, but with the long, overhanging, spoon-shaped bow, which is one of its distinguishing characteristics; the jib is all inboard, and there is no necessity, when a squall threatens, for lying out on a slender bowsprit to gather in a refractory sail, at the risk of being thoroughly soured in salt water. The boats are remarkably well-balanced, and require no laboring at the tiller to overcome the grip of a big mainsail.

The racing craft, large and small, are in a class apart. In these boats, speed is the primary consideration; and this involves the most costly form of construction, in order that all unnecessary weight may be saved. Provided with hollow spars and silk sails, and with all of the latest notions in equipment, an eighteen-foot racing machine, decked of course, but without cabin, will cost about a thousand dollars. The development of this type of boat, which is good for little besides racing, has had an unwholesome tendency to restrict that sport of late years to men who have long purses. It also has produced a type of boat that is decidedly deficient in seaworthiness and comfort. To counteract this, and to give the man of moderate means an opportunity to enjoy the sport of yacht racing, which is perhaps the finest sport in the world, and one that is utterly free from the taint of gambling that attaches to nearly all others, popular yachting clubs are adopting one-design classes, the boats of which are all built to conform to certain specifications which demand boats of a wholesome type and of reasonably moderate cost. In one club, in the vicinity of New York City, there is a class for dories, modeled after the staunch little boat which the Gloucester fishermen have rendered famous. They are inexpensive, and racing among them is just as exciting, and calls for the exercise of just as good seamanship as in the more expensive classes.

Providence has wisely ordained, for the benefit of the man of comparatively slender resources, that the man of wealth, with a taste for yachting, usually tires of one craft after a season or two, and orders another, usually a larger and more expensive boat. Thus it comes about that there are many excellent second-hand yachts for sale, at prices much below their original cost. But the tyro should not trust himself to buy, unaided by the counsel of some one of experience and good judgment. Human nature is weak; a greenhorn is a great temptation to the man who has a boat to sell, and paint and putty readily conceal serious defects.

The shallow centerboard boat, which was long regarded as the distinetively national type of boat, exemplified in the small classes in the catboat, has lost much of its popularity of late years. It is impossible to make such a boat "fool proof." She can be capsized. Indeed, in the hands of a man who is not a fool she sometimes suffers that calamity. And since it has been demonstrated that the keel boat is just as speedy as the skimming dish, and perhaps a trifle faster, the demand for the latter for racing has very much abated. But in shoal water, no other boat can be sailed. In certain points of handiness, too,—running ashore, making landings, navigating waters of unknown depth, etc.,—she excels. Therefore, like the poor, she is destined to be always with us. Properly modeled, not over-canvased, and handled with care, she is reasonably safe. And it is very easy to make her at least non-sinkable, which is the next best thing to being non-capsizable.

Now a deep-keel boat, with a lot of lead low down, tugging the harder to right her the farther she lists, is practically non-capsizable. There can be no doubt, therefore, that she is the better type of boat, especially for the beginner, and if the sailing conditions in local waters admit of her use. But even then she is not "fool proof." In the hands of a "duffer" she may be laid over on her beam ends until she fills and sinks. And she is an awkward boat with which to strike a rock or shoal. Whatever kind of boat he may sail in, the sailor must always "keep his weather eye open."

When on the water, either sailing or rowing, if there are other persons in the boat—especially if these be women—always take every possible precaution against accident. It is safe to say that four-fifths of the lives that are lost while boating are needlessly sacrificed by reason of negligence, carelessness, thoughtlessness, or reckless fool-hardiness. Take no unnecessary chances; when you may exercise discretion—and in most cases this is your privilege—always choose the safe side. Usually you are in deep water; do not forget this. A depth of even four feet is, in the excitement and panic of an accident, dangerous to persons who cannot swim. Above all, don't "rock the boat." This is often done in a spirit of "fun," to scare occupants of the boat who may be naturally timorous, and very many fatal accidents have resulted from this most reprehensible practice. *Don't do it!*

Emergencies which call for the exercise of the best judgment and skill at command will sometimes arise—perhaps quickly, without warning, as a sudden squall, or imminence of collision or of striking a rock or other object. Experienced sailors usually know what to do and how to do it, and it should be the chief concern of the amateur to school himself for emergencies, by learning from others, by studying all the phases of danger, and by the use of good sense. Coolness and self-control in trying moments are of the first importance. Upon this may depend the lives of those who are dependent upon you, who confide in you, and for whose safety you are chiefly responsible. In the face of danger do not "lose your head"; your example will be most beneficial in its effect upon others. A panic—in most cases wholly needless—increases the danger tenfold.



## KNOTS AND SPLICES

THE various ways of making ropes fast to each other, to rings, spars, masts, or other objects, are known as knots, bends, hitches, and splices. In nautical language, a hitch is a temporary knot that can easily be slipped off, while a bend is a more permanent knot. The making of knots and splices should be part of the education of every one who indulges in outdoor sports.

The fisherman is constantly called upon to make firm, delicate knots in his gear, and the sailor who cannot make a dozen different varieties of bends and hitches does not know the first rudiments of seamanship. It often happens that the security of lines depends upon the proper tying of a knot. A well-tied knot never slips, nor does it jam so that it cannot be readily untied; it is also neat and pleasing in appearance. The rough, cumbersome knot is not only ungainly, but in all probability it is insecure. All ropes, to give good service, should have the ends securely whipped, that is, bound around to prevent the strands from unlaying.

For knot-making purposes a rope has three parts, the standing part or main body of the rope, the end or short part, with which the knot is made, and the bight or loop formed by the end and standing part. (Fig. 1).

To understand the tying of knots, one must acquire the knack of tying them for himself. Even those who are all clumsiness at first can become, by a little practice, quite efficient. A few of the principal kinds of knots, with diagrams illustrating the manner of tying them, are here given.

## KNOTS

The *Overhand Knot* (Fig. 2) is made by passing the end of a rope over the standing part and through the bight so formed. The diagram shows it when made and when pulled taut.

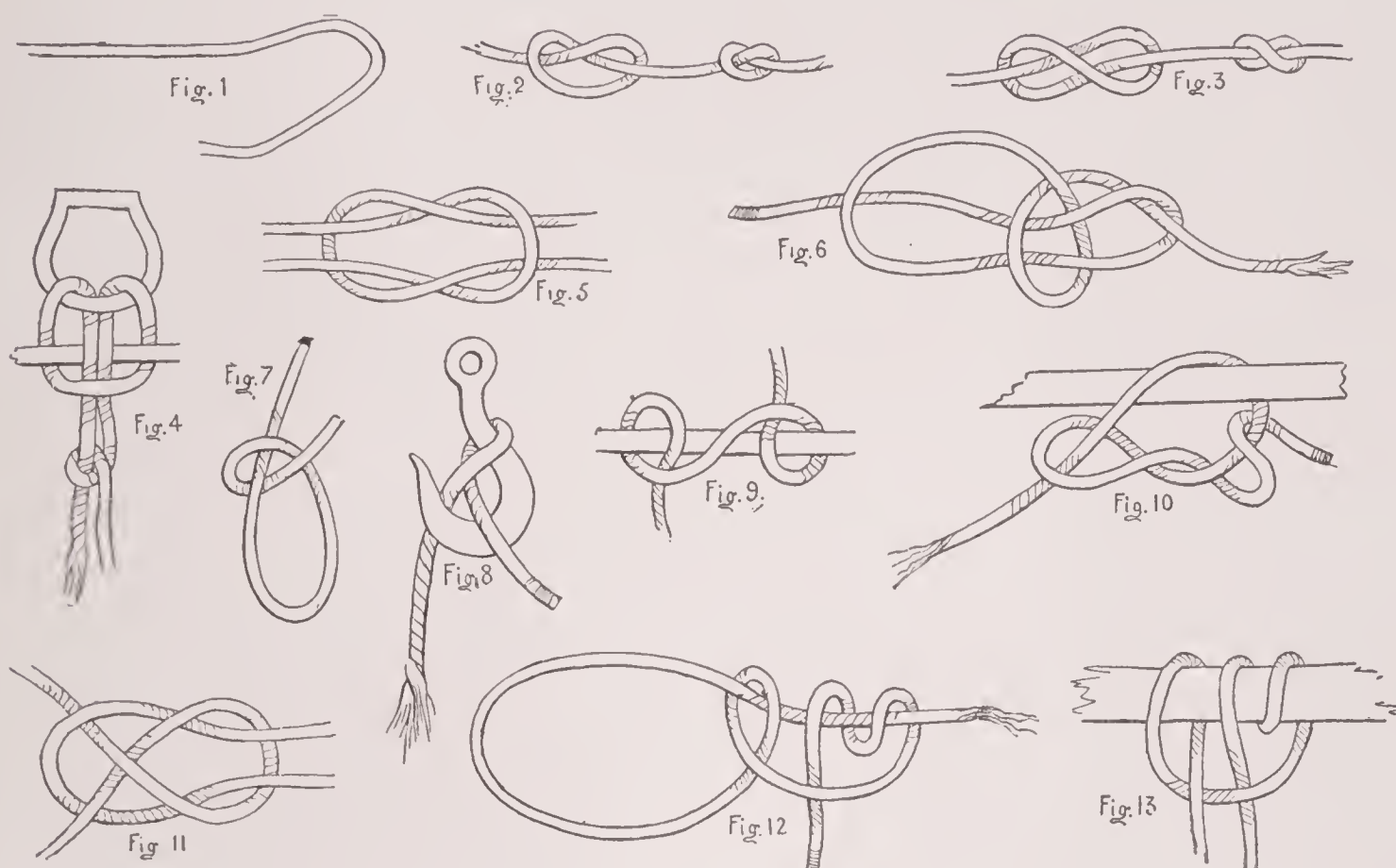
The *Figure Eight Knot* (Fig. 3) is a development of the Overhand. To make it, pass the end around the standing part, under its own part, and then through the bight so formed. The advantage of this knot is that it will not jam. It is shown here as it appears when made and when fast.

The *Larks-head* (Fig. 4) is a very useful knot. It can be cleared by pulling out the crossbar of wood or "toggle."

The *Reef Knot* or *Square Knot* (Fig. 5), is the one most frequently used on ship-board and, indeed, everywhere that knots are to be tied. To make it, first make a plain overhand knot, then repeat the operation by taking the end and passing it over and under the loop, drawing the parts tight. Simple as this knot is, the tying of it is not easily learned. When incorrectly made, it is called a "granny" knot, and is sure to yield to strain.

*Bowline Knot.* (Fig. 6.) When this knot is made, one end of the rope is supposed to be attached to some object. Take the end of the rope in the right hand and

the standing part in the left. Turn the bight of the standing part over the end part so as to form a neck on the standing part. Next, lead the end around the standing part above and stick it down through the neck. Draw it taut and the knot is complete.



## HITCHES

*Half Hitch* (Fig. 7) is used for fastening a rope to an upright or spar. The diagram shows how it is made.

The *Blackwall Hitch* (Fig. 8) is employed to jam the bight of a rope to a hook. It will hold only as long as there is a strain on the standing part.

The *Clove Hitch* (Fig. 9) is used for hitching the ratlines to the rigging.

The *Timber Hitch* (Fig. 10) is a quick way of bending a rope to a spar. A loop or bight is formed by twisting the end of a rope around its standing part as shown in the diagram.

The *Sheet Bend* or common bend (Fig. 11), is used for bending two ropes together.

The *Midshipman's Hitch* (Fig. 12) is useful for securing gear. It is made by taking a half hitch with the end of the rope around the standing part and then jamming it by taking another turn through the same bight.

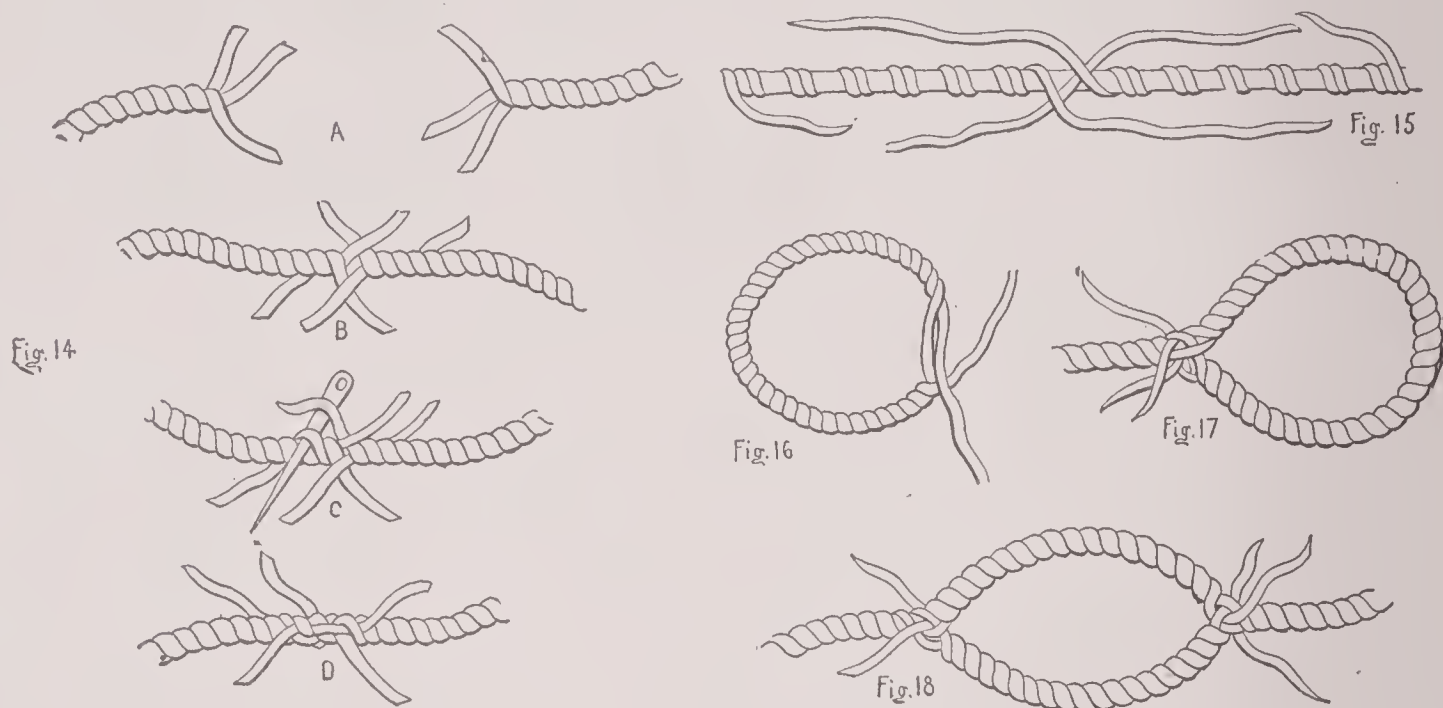
The *Magnus Hitch* (Fig. 13) is used for bending ropes to spars, quickly and simply.

## SPLICES

Splicing a rope means joining the two ends together by weaving the strands one between the other. It is an operation that cannot be correctly performed without considerable practice. Sailors generally splice their ropes left-handed, as the splice looks neater when done in that way. The following are some of the principal splices used by sailors:—



The *Short Splice* (Fig. 14) is that used for all general purposes; it embodies the principles of all other splices. It is made by unlaying the ends of the ropes that are to be joined (Fig. A) to a length of ten to twelve inches. To simplify the operation, grease the strands well, and, having opened them out, place the two ends together. (Fig. B.) Now take a greased marlinespike and open a strand, as in Figure C. Through the opening thus made, shove the nearest strand of the opposite rope, and so on with the other strands, raising alternate strands with the marlinespike on both rope ends. The splice, after the two ends have been once put through, presents the appearance shown in Figure D. Split off half of the yarn of the projecting strands and repeat the former operation; again cut off



half of the yarn, and interlace as before. The projecting ends may now be trimmed off, and if the strands have been pressed in carefully, a neat and strong splice will have been made.

The *Long Splice* (Fig. 15) is used where the rope has to pass through a block after being spliced. The ends of the rope are unlayed to a length of four to five feet, and the loose strands are knitted by putting each strand of one between two of the other, decreasing the quantity of yarn in each strand as the splicing proceeds. It is finished and fastened in the manner of a short splice.

A *Gromet* (Fig. 16) is a ring formed of a single strand laid over three times.

An *Eye Splice* (Fig. 17) is made by unlaying the end of a rope and placing it back over the standing part and weaving the loose strands into the standing part with a marlinespike, after the manner described in making a short splice.

A *Cut Splice* (Fig. 18) is used to form an eye in any part of a rope. A piece of rope the length of the eye required, allowing for the ends forming the splices, is laid along the main rope and joined in the way already described.

# AMATEUR PHOTOGRAPHY

## THE CAMERA AND THE LENS

THERE are three classes of Cameras—the bellows, or tripod, Camera, the hand Camera, and the folding Camera; the latter combines the essential features of the other two, and is the one generally selected by the amateur who wishes to make both snap shots and true pictures. The simple hand camera is intended primarily for snap shots, and is not well adapted for making “time” pictures or portraits. It has either a universal focus or a device for quick focusing, both of which must necessarily be more or less approximate. Generally, too, it carries films, on account of their light weight, but these do not give the best results.

The regular tripod Camera is by far the best for studio and portrait work and for careful work in general. It is the kind of instrument used by professionals. The average amateur, however, wants a Camera that he can take with him on holiday excursions—one that he can set up on a tripod when he wishes to photograph a landscape, or that he can hold in his hand when he is photographing a dog. The distinctive features of the various styles of Cameras will not be described here, as their uses may quickly be learned from the instruments themselves.

In picture making, the form of the Camera is not so important as is the character of the lens. A lens of wide angle includes more of the view seen by the eye than does one of narrow angle, but the latter gives a larger image at the same distance and produces better pictorial effect. The former is excellent for taking interiors, for copying, and for photographing buildings in confined situations; but it is not satisfactory for general work. It “takes in” too much; the art of picture making is not in getting all that you can on a plate, but in leaving out, as far as possible, that which does not add to the desired effect of the picture. Unless he can afford both kinds of lenses, therefore, the amateur will do well to select the one of smaller angle.



## COMPOSITION

The Composition of a photograph goes far toward making it a success or a failure. Do not “snap” at a wide stretch of valley, or an expanse of water, and expect to get an interesting result. Select, rather, some picturesque nook, a few trees, a glimpse of water, or a boat drawn up on the shore, and aim to have in your picture one object or group of objects in



which interest may center, and to which everything else on the plate is subordinate—a mere setting or background for the real picture, which should tell a story of some sort.

Avoid having in your picture two objects of especial interest, widely separated. The eye will glance from one to the other, when it should rest on one and be satisfied. If you are taking a landscape, see that your foreground is short, and let the horizon line be beneath, rather than above, a line drawn horizontally through the center of the picture. All pictures contain lines which give them their character. Have these lines converge to a point within the bounds of the plate; if they run off into space, the picture loses its interest.

Give the object an appropriate setting. The wall of a house made of brick, or of weather-boarding, is a poor background for almost any subject. At the same time, do not let the background be too prominent. Let it be neutral or indistinct, and it will not attract the eye from the principal object.

When you photograph a road, do not stand in the middle of it. Go to one side. A fence that runs horizontally across a picture spoils it. Let it be at an angle with the bottom of the plate—if you cannot keep it out altogether.

When you have your picture finished, cut it down and you will see how much it is improved by leaving out the unnecessary things. Study photographs that please you, and try to imitate them in style and arrangement. Unless you learn something of composition, your photographs, whatever their chemical excellence, will never rise to the dignity or interest of real pictures.

The mechanical details of picture making may be arranged under three general heads—exposure, development, and printing.

## EXPOSURE

The substance on which negatives are made is in the form of roll films, cut films, or glass plates. A film is a thin support of transparent celluloid, and is either wound on spools or cut into lengths suited to the camera in which it is to be used. It weighs very little, and several exposures may be made from a single spool of the smaller sizes; but it curls and cracks, and the negatives are hard to develop and print. Films are used only in “snap-shot” cameras. The plates used by professionals, and by many amateur workers, consist of a piece of thin glass, on one side of which is a coating of gelatin, sensitized with a salt of silver. This coating is no thicker than a sheet of paper. It is alike on both plates and films. Films for snap-shot cameras are so protected with black paper that they may be placed in the camera by daylight. Glass plates must be placed in the plateholder while in the dark room.

When inserting a plate in the holder, be careful to have it film side up; that is, it must be so placed that when the holder is in position in the camera the sensitized gelatin film, which covers one side of the glass, and

which is to receive the photographic image, will be toward the lens. As plates and films are very sensitive to white light, only a faint ruby or orange light can safely be used while handling them before development. This makes it difficult for a novice to distinguish between the glass and the film side of the plate; but if it is held so as to reflect the light, the glass side will show a bright, clear reflection, while the film side will appear dull and misty; or if the finger is placed lightly on the corner of the plate, the film side will feel velvety and the glass side smooth. Never touch the film side, however, if you can avoid doing so, as the perspiration from the fingers will cause a defect in the finished negative. It is not necessary to touch the film side except when plate-holders are loaded in absolute darkness. Be sure that the plates which remain in the box after loading are carefully covered by the black paper, and that both the box and the plate-holders are tightly closed before any outside light is admitted to the dark room.

When you have chosen your subject, if you are using a hand camera with a universal focus, all you need to do is to judge the distance so that the pictured image will be the desired size; set the proper "stop," according to the light, and regulate the speed of your shutter to suit the motion of the object, if it is moving. The distance of the camera from the object to be photographed should be determined by the size of the latter; if the camera is too near, the lines will not be sharp; if the camera is too far away, the object will be too small in the picture. From five to fifteen feet is about the right distance when you are making a portrait; for a house, or other large object, the distance should be greater. "View finders," which are attached to most cameras, show the comparative size of the picture as it will appear on the plate, and the range of objects that will be included.

"Stops" are circular openings of various sizes, in a disk placed before the lens, in hand cameras. These stops regulate the amount of light admitted when the exposure is made. The smaller the stop, the sharper the image will be; but in bright sunlight, if the object is stationary, use a small stop and set the shutter for a slow movement; if the object is moving rapidly, use a large stop and a quicker shutter. With a quick shutter it is difficult to get a good picture if the object is in the shade, or if the day is cloudy. Bright sunlight is almost a necessity for good snap shots; but, on the other hand, it should be remembered that sunlight makes sharp, ugly shadows on the face in portraits. The natural deduction is that instantaneous exposures are not adapted to fine work, and that a camera intended solely for snap shots is more or less unsatisfactory, except as a means of obtaining humorous, remarkable, or souvenir, pictures which have little merit from an artistic standpoint. The convenient size and the simplicity of operation of the hand camera make it useful in certain fields where other cameras are too bulky, and require too much time for adjustment.





All combination, or folding, cameras, and many of the hand cameras, are provided with shutters which may be set for either "time" or instantaneous exposures. For instantaneous work with a combination camera, the same instructions will apply as for the ordinary hand camera, though an explanation of the focusing device must be added. Focusing may be done either on the ground glass or by the scale. The latter is used chiefly for snap shots, when there is not sufficient time, or it is not convenient, to use the ground glass. After the front of the camera is lowered, the bellows is drawn out until the proper focus is reached. The scale in feet is marked along the line of extension, and a pointer, which is affixed to the bellows frame, indicates the focal distance on the scale. For example, if the object to be photographed is judged to be twenty feet away, the pointer should be set at figure 20 on the scale. The bellows must be drawn out farther to photograph a nearer object, and be pushed back for one at a greater distance.

The ground glass occupies exactly the same position in the camera during the time of focusing that the sensitive plate occupies at the time of exposure. It is examined through an opening in the back of the camera. An inverted image of the object is seen on the ground glass, and the proper focus is secured by extending or collapsing the bellows until the image stands out clear and distinct. In taking a portrait, focus on the eyes; for other pictures, focus on the cracks between bricks, the bark of a tree, or some similar detail. In a landscape, select the object that "tells the story" of your picture, and focus sharply on that. Always use the largest stop, or none at all, when focusing.

Let us suppose that the camera is set on the tripod, for photographing a landscape. If no tripod is used, the camera must be held motionless on some stationary object, such as a stump or a fence. First, be sure that the instrument is level, and that the feet of the tripod are secure. Open the shutter or remove the cap, and place the largest stop in position; then put your eye close to the opening in the back of the camera, and throw the black focusing cloth over your head, or shut out with your hands as much light as you can. Look *at* the glass and not *through* it, and you will see, in colors, a beautiful reflection of the view. In the distance are mountains; near at hand is an old barn with a dilapidated, zigzag fence running past it and disappearing in a grove of trees; at the bottom of the plate are the blue sky and white clouds, and at the top are grass and green foliage. A little way beyond the barn is a dead tree, the black leafless branches standing out clearly from the rest of the picture. Focus on this. If your foreground does not show sufficient detail, use a smaller stop; but remember that the sharper your picture is, the less it is like nature. A wide-open lens, properly used, gives the best pictorial effect. When you can see the smallest branches distinctly, replace the cap or close the shutter; remove the ground glass, insert the plate holder, and draw the slide. All this must be done carefully, so that the position of the camera will not be disturbed.

Much now depends upon your judgment, as the length of the exposure is of the utmost importance. You have provided yourself with landscape

plates, that is, plates that are not too highly sensitized. In this work you do not have to make a snap shot, for which extra rapid plates are required. Softer pictures and more delicate details are secured with slow plates and long exposure than with quick plates and short exposure. The sun is shining brightly, and you have chosen a position with the sun at your back. You can take a picture toward the sun if it is high enough so that you can shade the lens tube with your hand, or with the slide from the plate holder; but if it shines directly into the tube, the plate will be "fogged," or blurred. All the conditions taken into consideration, you decide that five seconds will be about the right time for exposure. Remove the cap carefully, in order that the camera may not be jarred, keep your hand out of range of the lens, and slowly count five. Replace the cap quickly. If you have a "time," or "stop," shutter, you can manipulate it for the proper exposure without using the cap. Now replace the slide in the plate-holder, with the side marked "Exposed" outward, or toward the lens. You thus avoid the possibility of a "double exposure," or of taking two pictures on one plate, as you will know which side of your plate-holder has been used, when you are ready to take another picture.

A beginner must experiment before he can judge the conditions well enough to determine the proper amount of exposure, and it is well to take two or three pictures under exactly the same conditions, giving a different time for exposure to each. The finished picture will show which length of exposure was best for these conditions.

If you are taking a portrait out of doors, have your subject sit in the shade, and make the exposure a trifle longer, say six seconds for a slow plate. If the plates are quick or extra quick, from one to three seconds will be sufficient; and, in a strong light, if your subject is very light in color, or white, you will find that you cannot remove or replace the cap too quickly. The tendency of beginners is to over-expose.

The hand camera is wholly unsuited to the work of photographing architectural subjects. For such work a tripod camera is necessary. It must have a swinging back, so that the plate may be kept in a vertical position when the front part of the camera is tilted upward in order to include the upper part of the building on the plate; and the front-board, to which the lens is screwed, should be so made that it can be moved up or down at will. By these means the building may be "centered" on the plate. If the camera is tilted upward and the plate remains parallel with the lens, the lines of the picture converge at the top, producing distortion. If you can make your exposure from the second story of a building opposite the one you are photographing, you may be able to produce a fairly good result with your hand camera; otherwise, do not attempt it.

Indoor work with the camera presents many fascinating features: Interiors of rooms, flowers, and portraits, are among the most desirable subjects to be had. Sometimes it is possible to photograph the interior of a room only by flashlight exposure, especially when it is desired to include a window in the view; but it is exceedingly difficult to get good results in this way. If a person be included in the picture, the sudden flash makes



him close his eyes, or gives him the appearance of staring, besides making deep, black shadows; or, if there is no shadow, the face comes out white and ghastly, with little or no detail of feature or expression.

It is difficult to focus an interior view. The best way is to have some one hold a lighted match in the center of the desired field, at the right distance from the camera; then, by passing the match from side to side and up and down, the extreme limits of the range may be ascertained. The lights should be turned low before the cap is removed and the slide drawn; the flash should come from directly over the camera or from the side, but never from the front.

The flashlight powder should be placed in a shallow pan. In igniting it, use a slow fuse or a long taper or gas-lighter. When the flash comes, be sure to shield your eyes.

Good portraits may be made in an ordinary room. If possible, select a room that has a window facing the north, and place your subject four or five feet from the window, and beyond it. Do not expect to get a good portrait if you use the wall paper for a background. Get a large square of cloth of a neutral tint, drab or gray, and fasten it to the wall behind your subject, or, better, make a light frame on which it may be stretched taut and kept from wrinkling. Have the background as far from your subject as the space will permit, so that the texture of the cloth may not appear in the picture. Never use a white background; it makes the picture too harsh. Have your subject turn two-thirds or three-quarters toward the light, and use a reflecting screen to lighten the shadows on the side of the face farthest from the window; this screen may be extemporized from a white sheet thrown over a clothes-horse.

The camera should stand near the wall of the room, so that no direct light will enter the lens tube. The window should be covered with muslin to soften the light. If there are lace curtains, not too solid in pattern, they may serve for this purpose. Seat your subject gracefully and naturally; do not strain after effect, or the result will be an awkward picture. The eyes of the subject should be turned toward the lens or a point near it. Indicate some object at about the same height from the floor as is the lens, and tell your subject to fix his eyes upon that. Study the face on the ground glass, and turn the subject's head a little this way or that, so that the shadows may not make strong lines on the face. In this connection, special care should be taken with the nose and the mouth. Focus on the eyes, and use the largest stop. This helps to give roundness to the portrait; a small stop would make the image flat, as if cut from paper and pasted on the background. Give full time to the exposure. Tell your subject to wink naturally, but not to shift the eyes from side to side. At least from eight to ten seconds should be taken for a satisfactory exposure. Let the time be more, rather than less, for an under-exposed portrait is harsh and unattractive.

## DEVELOPMENT

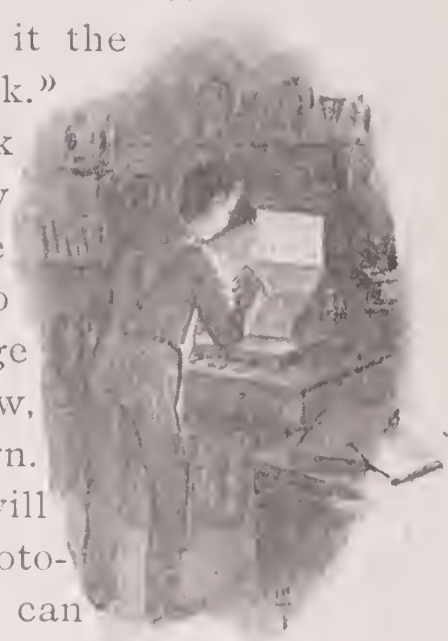
THE smallest direct ray of white light will ruin a sensitive plate or film before or during development. Red or dull orange light does not effect the plate. A dark room must, therefore, be fitted up, and in it the plates can be handled without danger of their being "light struck." A small room or closet may be darkened by tacking strips of black felt, or other cloth, around the edges of the door and over any other openings that may appear. If there is a window in the room, it must be made light-proof. It may be found difficult to do this, but the best way is to paste several thicknesses of orange or red paper over the windows, and thus the light from the window, if not too strong, may be made to serve in place of a ruby lantern.

At night, an ordinary reading lamp set outside the window will furnish the necessary light. If there is no window, a regular photographic lantern must be used. A thoroughly serviceable lantern can be made from a wooden box large enough to hold a common lamp. Blacken the box inside and out with paint or liquid shoe-polish, and paste strips of black paper over all the cracks. Cut a hole, say four by six inches, in the front, and cover it with several thicknesses of orange or ruby paper. The number of thicknesses of paper must be regulated by the amount of light needed, and this should be no greater than is necessary to observe the process of development. An opening for the admission of air must be provided at the back of the box, near the bottom, and an opening for a chimney at the top. It will be found an advantage if the front is shaded with a sort of awning or hood, so that the light will be reflected downward, and not upward into the eyes. A second opening, or window, may be made in the side of the box and covered with but one or two thicknesses of paper. This may be fitted with a tight, sliding cover, and will afford a strong light, which may be used when it is necessary to examine an unfinished negative; it should be used only when necessary, however, and should be kept closed when not needed.

If you have any suspicion that your light is not safe, test it in the following manner: Place a plate in the holder in total darkness, draw the slide sufficiently to expose half of the plate, and allow the light from the dark room window or lamp to fall on this exposed half, for several minutes. Then develop the plate, the usual length of time, in total darkness, and if the exposed part is no darker than the unexposed part, your light is safe.

Running water is a great convenience in a dark room, and for this reason there is no better place for developing purposes than the bath room. If developing is done only at night, the room may be darkened by simply closing the door and the window shutters and drawing the shades.

Besides the lantern, the necessary articles for the equipment of a dark room are a developing tray, a fixing tray, a four-inch glass graduate, and several bottles for holding chemicals. The trays may be of glass, porcelain, hard rubber, or japanned tin, and should be large enough to hold one or more plates or films.





Before taking the plate from the holder, have the bath ready in its tray and the developer in the graduate. The trays should be marked so that they may be readily distinguished; the one used for the "hypo," or fixing solution, should never be used for any other purpose. Never let the hypo get into the developer, or toning solution, or touch an undeveloped plate or print.

There is a large number of developing formulas from which to choose. Developer that is especially suitable for a traveling outfit may be purchased, ready mixed, in liquid or in powdered form. The economical photographer, however, makes his own solutions at one-tenth the cost of those purchased ready-made.

Following are two good developing formulas:—

#### HYDROCHINON DEVELOPER

I

Hydrochinon .....	1 oz.
Sulphite of soda crystals.....	5 oz.
Bromide of potassium.....	10 gr.
Distilled or pure well water .....	55 oz.

2

Caustic potash.....	180 gr.
Water .....	10 oz.

Take four ounces of No. 1 and one and one-half ounces of No. 2 and pour into a developing tray. After using, pour into a separate bottle. This may be used repeatedly by adding one drachm of No. 1 and ten drops of No. 2 to every eight ounces of old developer, but the mixture is cheap, and the best results are always obtained by using it but once. The temperature of the room should be between 70° and 75° Fahrenheit.

#### EIKONOGAN-HYDROCHINON DEVELOPER

I

Distilled or pure well water.....	32 oz.
Sodium sulphite (crystals).....	4 oz.
Eikonogan.....	240 gr.
Hydrochinon .....	60 gr.

2

Water .....	32 oz.
Carbonate of potash.....	4 oz.

For developing use:—

No. 1.....	2 oz.
No. 2.....	1 oz.
Water.....	1 oz.

Aim to keep the developer at a uniform temperature of about 65°. In summer use ice, if necessary; in winter warm the solution slightly. Use less water in the developer for a snap shot than for a time exposure. More of No. 1 increases density of negative; No. 2 gives detail and softness.

It is not necessary to make up at one time the whole amount of the solution called for by these formulas. You may make up one-half or one-fourth of the above quantity at a time, and so have fresh developer to use.

While hydrochinon and cikonogan are excellent developing agents, they are seldom used by professional photographers, who prefer pyragollol or pyrogeolic acid, as it is called, for this purpose. "Pyro" makes soft, quick-printing negatives. It has a slight tendency to "fog" the plate, unless properly restrained, but, when skillfully used, produces negatives of the finest quality.

The following is a simple formula for Pyro developer:—

1	
Sulphite of soda.....	1 oz.
Water.....	4 oz.
2	
Carbonate of soda.....	1 oz.
Water.....	4 oz.
3	
Bromide of potassium.....	48 gr.
Water .....	1 oz.

To develop, combine four drams each of No. 1 and No. 2, and add eight grains of dry Pyro and four ounces of water; then add five or six drops of No. 3. The quantity of water may be increased or lessened, and so with the Pyro. More water makes a thinner negative—one with less contrast; more Pyro makes a stronger negative, but too much of it will fog the plate. If the developer works too quickly, add more of No. 3. Use this developer for one plate only; then throw it away, rinse the tray, and mix a fresh supply.

Pyro stains the fingers, and those who are fastidious about their hands may prevent this by wearing rubber finger-cots. When you are ready to develop, remove the plate from the holder and dust it carefully with a soft camel's-hair brush. This will prevent "pinholes." Nothing will be visible on the plate, which will look exactly as it did before exposure. Briefly, the theory of negative-making is that the composition which covers the plate is very sensitive to light, and wherever it has been touched by rays of light the chemicals cause it to become darker. Thus, when the image is reflected on the plate in the camera, the light from the different objects affects the composition much or little, according to the color of the object—much if it is white, and little if it is black. When subjected to the chemical action of the developer, the light-affected portions become dark, the degree of darkness depending upon the color of the object. The colors on a negative are, therefore, the reverse of those of the subject—white becomes black and black becomes white, hence the name "negative."

Put the plate into the developing tray. Flood it quickly and evenly with the developer from the graduate, and immediately begin to rock the tray gently so that the developer will cover every part of the plate at once. Look closely to see if there are any bubbles or spots where the developer does not cover the plate, and if there are such, touch them lightly with the finger-tip and they will disappear. Continue





rocking the tray and in a few moments the picture will begin to appear—the strongly-lighted portions first showing up as dark spots on the plate. Gradually the image will become more distinct until it stands out clear in every detail. The whole picture will soon begin to darken and grow less distinct. Now lift the plate carefully, without touching the film, and hold it toward the red light, but not too near it. If the details of the picture and the high lights are very dark, the development has proceeded far enough, and the plate may be removed and rinsed for the “fixing” bath.

Should the picture flash out quickly, as soon as it is placed in the developer, and then begin to darken, the plate has been over-exposed. The instant you suspect this, remove the plate and add from two to five drops of a solution of one part bromide of potassium and ten parts water. This will retard development and tends to prevent the “flatness” found in an over-exposed negative, but it will not wholly correct the error you made at the time of exposing the plate.

Strips of films may be cut apart before developing, or the whole strip may be developed at once. In the latter case, take one end in each hand and pass it through the developer from end to end, continuing the rocking motion until development is completed. The films can then be cut apart before fixing.

When the development is complete, all of the sensitive composition on the plate that was affected by light has been darkened by the developer, and that which remains unaffected must be removed before the negative can be exposed to light. The hyposulphite of soda accomplishes this, and renders the negative proof against light.

The face of the plate is now dark and the back is yellow. The next step is to immerse it in the fixing bath. This is made by adding to one part of hyposulphite of soda four parts of water. The following is a good formula, and produces a solution which remains clear for some time:—

#### HYPO-ACID FIXING BATH

Hyposulphite of soda.....	16 oz.
Distilled or pure well water.....	64 oz.

Dissolve and add the following hardening solution:—

Water .....	5 oz.
Sodium-sulphite crystals .....	½ oz.
Commercial acetic acid (25 per cent pure) .....	3 oz.
Powdered alum.....	½ oz.

Let the plate remain in the hypo bath until all the yellow has disappeared from the back. After a thorough washing in at least fifteen changes of water, or in running water for about thirty minutes, the negative is completed and may be exposed to the light. It is most important that the plate be left in the hypo until all trace of yellow has disappeared, and that the final washing shall be so thorough as to remove all trace of hypo from the film. The permanency of the negative depends upon this.

Films may be prevented from curling by giving them a final bath composed of one part glycerin and about ten parts water. When plates have

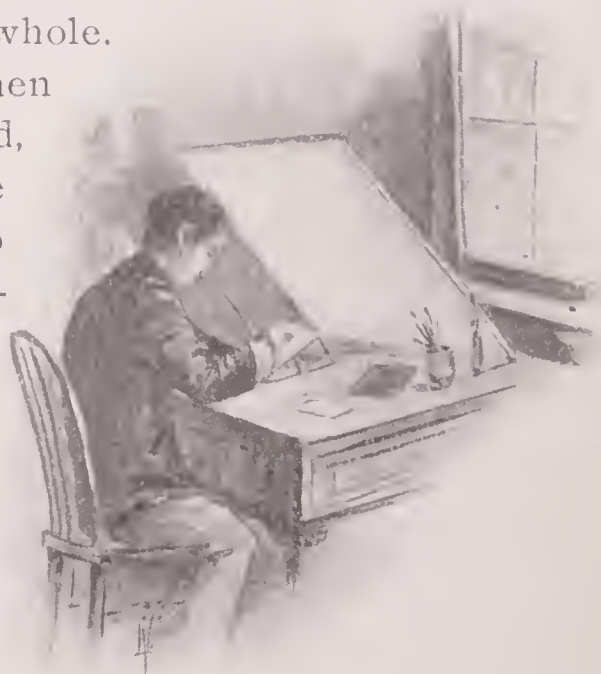
been thoroughly washed, swab them gently with a tuft of cotton and place them on edge in a rack to dry. Do not attempt to hurry the drying by placing them in the sun or applying heat in any way.

If the negative is too intense, that is, if the development has been carried so far that the high lights are opaque, it will make a harsh print and will print slowly. But it may be "reduced" by immersing it in a solution made as follows: Dissolve twenty-five grains of red prussiate of potash (potassium ferroeyanide) in eight ounces of water. Add a dram of this solution to another compound consisting of one part hyposulphite of soda and sixteen parts water. Immerse the negative, and rock the tray gently.

In time the plate will be reduced to the desired degree of thinness, and it should then be washed in at least fifteen changes of water, or in running water for an hour. If some parts of the negative are too thick and others are of correct density, you may reduce the plate locally by dabbing the too-opaque parts with a tuft of cotton, saturated with the reducing solution. This may take some time and patience, but the result will more than repay you for the trouble. In this way the sky may be reduced so that the natural clouds will print plainly. White-paper skies are a serious defect in a photograph, for they are glaringly untrue to nature. If your new negative has no clouds, they may be printed in from a separate negative.

If a negative be too thin, it may be intensified, and its printing quality improved by the following treatment: Prepare a saturated solution of bichloride of mercury in water. Pour this gradually into a solution composed of one-fourth ounce iodide of potassium and six ounces water, until the red precipitate that forms can no longer be dissolved by shaking. Be careful not to add more mercury than will make the solution very slightly turbid. Now add one ounce hyposulphite of soda, dissolved in enough water to make a twenty-ounce solution of the whole. This should be diluted with about three parts water when ready for use. If the plate has not been thoroughly fixed, the intensifying solution will produce yellow stains. Be careful not to over-intensify. Should the process go too far, the negative can be reduced by placing it in the fixing bath for a short time.

If your negative show pinholes or other defects, these may be spotted out with India ink applied with a fine-pointed, camel's-hair brush. The retouching of portrait negatives is an art in itself, though the method is simple. Those parts of the plates which are to be retouched are first coated with retouching varnish, which gives a "toothed" surface for the pencil. A hard lead pencil, ground to a fine point, is used. The negative is seen by transmitted light, and the pencil is applied to those parts which are too thin and would print too dark in the picture. Good taste and practice are essential in order to do this work well, but every amateur should learn to retouch his own plates.





## PRINTING

THE theory, in printing from a photograph negative is the same as in making the negative itself. The paper is covered with a sensitive composition, which will be darkened by exposure to light. The negative is put in a printing frame, film side up, and the paper is placed over the negative, film side down, and held firmly in place by the back of the frame—much as an ordinary picture is framed. In printing from films, plain glass is put in first, then the film and last the paper. The whole is then exposed to the sun, and the light which passes through the negative darkens the paper. It will be remembered that white objects are black in the negative, and *vice versa*; in printing, the whites and blacks are reproduced as in the original, because the sunlight penetrates only the lighter portions of the negative and turns the paper dark, while the darker parts protect the paper from the light, more or less, so that it remains white or shaded.

There are two general classes of photographic paper—"toning," or "printing-out," paper, and developing paper. Toning paper may be handled in subdued daylight; developing paper should be handled in gas or lamp light.

## BLUE-PRINTING

THE "blue-print" process is the simplest of all. Blue-print paper is placed in the frame with the negative and exposed to bright sunlight for several minutes. The process of printing may be observed by raising one end of the hinged back of the frame, care being taken not to allow the paper to slide or change its position against the plate. When a deep bronze tint appears in the darkest portions of the print, remove it from the frame and wash immediately in several changes of water, or in running water. The image will at once begin to be clear, and in a few minutes the print may be taken out and dried or mounted.

Blue prints are easily made, and serve to furnish inexpensive souvenirs of an outing. Silver or albumen paper is most commonly used. Print in the same manner as for blue prints, but do not remove from the frame until the picture is slightly darker than it is desired to be when finished. Then wash in clear water, and place, face downward, in a toning solution made from the following formula:—

## TONING SOLUTION

## A

Chloride of gold.....	1 gr.
Water .....	20 oz.

## B

Acetate of soda .....	15 gr.
Water.....	1 oz.

## C

Saturated solution of sulphate of copper.

Add B to A, then add from ten to fifteen drops of C, and allow the mixture to stand at least twenty-four hours before using.

The prints will fade somewhat, changing from reddish brown to a deep, purplish color. When the desired "tone" is secured, wash the prints and place them in the fixing bath for twenty or thirty minutes. The fixing bath is a solution of one part hypo to four parts water.

Silver prints may be toned and fixed at one operation by the use of the following:—

## COMBINED TONING AND FIXING BATH

Water.....	20 oz.
Hyposulphite of soda.....	5 oz.
Citric acid .....	60 gr.
Acetate of lead.....	60 gr.
Sulphocyanide of ammonium.....	240 gr.

Mix these in the order given, dissolving the solids as added, and let the mixture stand twenty-four hours. A precipitate will form, and the clear solution should be poured off. To this add three grains of chloride of gold. Wash thoroughly for at least an hour after removing from the hypo bath. Use running water if available; if not, make frequent changes.

Prints toned in a combined bath are liable to fade, and the separate toning and fixing baths are recommended as insuring permanency. As many prints as desired may be made before beginning the toning process, for several may be placed in the toning and fixing baths at one time. They should be kept separated and in constant motion, to prevent uneven or irregular action of the chemicals.

There are many varieties of albumen paper, one of which, known as "self-toning" paper, is almost as easy to use as blue-print paper. The paper is toned by simply washing the print in a solution of common salt and water.

Developing papers may be divided into two classes—those printed by sunlight and those printed by artificial light. The best of the developing papers is that known as "platinum," or "platino-type." This produces the most beautiful of all photographic prints; the finished picture is a rich black and white, which surpasses a fine steel engraving in tone and depth. The process is simple but requires careful manipulation. The paper must be handled in a dim light—gas-light will answer. The exposure to sunlight is much shorter for platinum paper than for the other papers that have been described. Watch closely, and print only until the high lights are faintly defined. The developing solution for platino-types is simply and easily made. It consists of:—

Oxalate of potassium (neutral).....	1 oz.
Water .....	4 oz.

The development is rapid, and should be promptly arrested when the desired shade is secured. When the development is complete, place the



prints, face downward, in a weak solution of chemically-pure hydrochloric (muriatic) acid. Prepare three separate baths and leave the print five minutes in the first, ten minutes in the second, and fifteen minutes in the third. Keep the prints moving while in the acid, and use a fresh acid bath with each batch of prints. Wash in running water for twenty or thirty minutes and spread the prints on papers to dry.

The developing papers which are printed by artificial light are generally classed as "bromide papers." Although they are less sensitive than plates, they are more so than sun-printing papers, and must be handled in fainter light. The exposure is made by gas or lamp light. The frame is held from six to eighteen inches from the flame, is given a slight circular motion to insure evenness and is withdrawn in from fifteen seconds to two minutes. The distance from the flame and the length of exposure are determined by the density of the negative. Like a plate, this paper shows no image until the developer is applied, and it is, therefore, impossible to observe the process of printing. Experience is the best teacher of the proper time of exposure. The development is very rapid, and is completed within a few seconds after immersion. The prints are then removed and given the same treatment as other papers. Following is a good formula for the developer:—

#### METOL QUINOL

Water.....	10 oz.
Metol.....	7 oz.
Sodium sulphite, crystals pure.....	$\frac{1}{2}$ oz.
Hydrochinon .....	30 gr.
Sodium carbonate, desiccated.....	.220 gr.
(or 400 gr. crystallized carbonate.)	
10 per cent bromide of potassium solution.....	about 10 drops.

Use a fixing solution of one part hypo and four parts water.

The formulas given above for the treatment of plates and prints are all good ones in general use, but in many cases, especially in toning and developing prints, it will be found advantageous to use the formulas given in the instructions that accompany the various papers; or the chemicals may be bought, ready mixed, specially prepared for use with any particular kind of paper or plate.

Albumen prints and blue prints may be dried between blotters, but the so-called "gelatin" paper must be allowed to dry naturally, as gelatin will adhere to other substances if pressed against them while drying. Prints should always be mounted when wet. The professional, whose time is valuable, trims his prints before toning, and hurries them from the washing water to the mount. The amateur should allow his prints to dry naturally, then flatten them under pressure, and when they have thus been made easy to handle, they should be trimmed. This may be done with a very sharp knife and a straight edge, if a regular "trimmer" is not available. Do not try to trim prints with scissors. Who but a tailor can cut with shears in a straight line?

Trim the prints boldly. Do not hesitate to sacrifice half the matter in the picture. Leave only enough of the "surroundings" to serve as a fitting background. Ordinarily you will have too much foreground; cut off at least a half inch.

When the prints are ready to mount, put them in clear water for a few moments. When they are limp, lay them, face down, on a glass, or other smooth surface, covered with clean paper. Place them one above another, so that they will overlap slightly. Press out the free water. Apply the paste thinly and evenly. Lay the print on the card, and place a sheet of paper or smooth cloth over it. Rub it down with considerable pressure, rubbing from the center outward. Use a print roller if you can get one.

Excellent paste is sold for photographer's use, but none is better than that made from the following formula:—

Flour.....	3 oz.
Alum.....	¼ oz.
Camphor.....	40 gr.
Water.....	20 oz.

Mix well and boil. It is ready for use when cold.

If it is not desired to mount silver prints, curling can be prevented by the use of a glycerine bath like that used for films. In choosing mounts, avoid gilt-edged or other ornate cards; select those of subdued colors and plain edges. Dark mounts are best. Remember that the mount is merely to support and frame your print—it should not compete in interest with the print itself.

Start an album with your first picture, and add a print from every printable negative. This will give a complete record of your work and progress, and will insure you against irreparable loss if a valued negative is broken or damaged. Moreover, photographs mounted on cards are easily misplaced, and besides it is often hard to avoid giving them to friends. Your complete set is then broken, and it is sometimes difficult or impossible to restore a missing picture. It may be that you will not care to show all your pictures. If so, keep the choice ones in an album by themselves, or in a portfolio unmounted.

























LIBRARY OF CONGRESS



0 038 701 686 7